COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Streetlight dispute by Towns of	)	
Franklin and Swampscott,	)	DTE 03-98
Contesting purchase price prepared by	)	
Massachusetts Electric	)	

INITIAL BRIEF OF PETITIONERS

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Section 1

1. 1 Introduction

The Town of Franklin has been engaged in discussions with Massachusetts Electric regarding a possible streetlight purchase since the spring of 2001. Mass Electric has provided the following prices to the Town of Franklin:

$366,228	June 2001
$482,796	January 2002
$431,492	March 2003
$430,951	May 2003

The Town of Swampscott has been engaged in discussions with Massachusetts Electric regarding a possible streetlight purchase since February of 2003. Mass Electric has provided the following prices to the Town of Swampscott:

$208,984	March 2003
$209,450	April 2003

The Towns have been successful in negotiating the language of the License Agreement and Purchase and Sale Agreement with Mass Electric, both of which agreements are included in the petitions, as finally negotiated, for reference purposes only. The parties have not been able to negotiate the purchase price. The Town filed a petition for dispute resolution on October 17,

2003, asking the Department to settle the dispute between the parties concerning the streetlight purchase price.

1.2 Jurisdiction

The Department has the jurisdiction to resolve this dispute pursuant to MGL c 164 s 34A (d), which provides in part as follows:

> ". . . any dispute concerning the terms of the alternative tariff, the compensation paid to the electric company, . . . shall be resolved by the department within 60 days of any request for such resolution by the municipality or any person involved in such dispute."

The Department has the jurisdiction to resolve this dispute concerning the compensation to be paid to the electric company.

1.3 Issues in Dispute

Regarding Gross Plant Investment

The Petitioners believe that the Company is required to base the calculation of streetlight plant value on gross plant investment values that reflect the gross investment of brackets and foundations in the year of the original investment. The Company believes that DTE 01-25 mandated the use of a set of gross plant investment values that shifted the date of gross plant investment in brackets and foundations to 1980 and 1983 respectively.

The Company contends it is sufficient for the gross plant investment for tax and the gross plant investment for sale to be the same in the year of the calculation (i.e. 2003). The Towns contend that the community specific tax gross plant values must agree with the community specific sale gross plant values in 1963 and every year since 1963.

The Company contends DTE 01-25 mandates the application of streetlight specific depreciation rates to the altered set of gross plant values that shifts the vintage year of brackets and foundations to 1980 and 1983. The Petitioners contend that the statute and both rulings require the application of streetlight specific depreciation rates to the community specific gross plant values, available on the Company's tax books, that reflect the actual vintage year of the original investment in brackets and foundations.

The Company contends that DTE 01-25 mandates a recalculation of gross plant investment values, even though gross plant investment values that are based on community specific retirements are available on the Company's tax books. The Petitioners contend the Department approval of the DTE 01-25 purchase price in Waltham is conclusive evidence that there is no such mandate to recalculate and shift gross plant investment values.

Regarding Depreciation

The Petitioners believe that the Company is required to calculate depreciation on correctly stated gross plant investment values, using streetlight specific depreciation rates that reflect the useful life of streetlight equipment. The Company believes there is no requirement to demonstrate that the depreciation rates used reflect the useful life of streetlight equipment, and that the Company is allowed to use a 4% depreciation assumption for the 50 plus years prior to 1971, which 4% rate has the effect of aggravating the historical under-collection of depreciation reserve, as reported by the Company.

The Petitioners believe the Company is required to make a reasonable assumption regarding the carry-over reserve in the carry-over year of 1963, similar to the assumption used by Boston Edison to calculate the Lexington plant value in DTE 98-89, and the post DTE 01-25 Waltham plant value in DTE 02-11. The Petitioners believe that the assumption regarding carry-over reserve in the accumulated depreciation account should be designed to reasonably estimate the streetlight specific depreciation historically collected in the years prior to the carry-over year.

The Company believes that DTE 01-25 mandates an assumption that the historical depreciation on the overhead wires and underground wires and conduit existing in 1963 was zero as of 1963, that the historical depreciation on brackets and foundations existing in 1963, and still existing today, was zero as of 1963, and that the historical depreciation on brackets and foundations existing as of 1963 and retired after 1963, was zero as of 1963. The Petitioners believe that the Department approval of the DTE 01-25 purchase price in Waltham with reasonably estimated carry-over reserve is conclusive evidence that there is no such mandate in DTE 01-25.

Regarding Allocation of Streetlight Plant Values

The Petitioners contend that the statute requires an allocation of "Unamortized Investment allocable to the acquired equipment", and that such allocation must reasonably account for the differences in original installed cost over time, and depreciation paid over time. The Company contends that an allocation of "price" between the equipment to be acquired and un-acquired, that assumes the same original installed cost on 29 year old equipment to be purchased by the Town and 1 year old equipment to be retained by the Company, and the same average depreciation paid on 29 year old equipment to be purchased by the Town and 1 year old equipment to be retained by the Company is permissible.

Section 2 - Gross Plant Values

2.1 DTE 01-25 requires the use of the "book value of the gross plant in service" as the starting point for calculating unamortized value.

DTE 01-25 requires the use of one bedrock starting point for any calculation of streetlight book value. At page 5 of the ruling in DTE 01-25, the Department cites the DTE 98-89 ruling as follows:

> "Unamortized Investment is equal to the book value of gross plant in service, net of accumulated depreciation. Petition of Towns of Acton and Lexington DTE 98-89 . . ."

The "book value of gross plant in service" referred to in the above quoted sentence in DTE 01-25 is calculated annually, by all utilities. The MECO formula for calculating the annual book value is described in the Company's response to the Town's Information Request 1-4. The annual recalculation of book value is equal to the book value of the community specific gross plant from the previous year, plus the annual community specific additions from the current year, less the community specific retirements from the current year. The result of that calculation is the "book value of the gross plant in service" for the current year. The same formula for the annual recalculation of gross book value is used by Boston Edison, and was described in DTE 98-89.

Each of the streetlight purchase prices calculated by Boston Edison since the ruling in DTE 01-25 (and before the ruling for that matter) uses the annual set of gross plant values, calculated in this fashion for each year since 1944. In BECO's case, this set of gross plant values is taken directly from their general ledger books and represents the common set of gross plant values used for streetlight sale calculation purposes and general accounting purposes.

> "For activity after 1990, the Company's composite distribution plant depreciation rate of 2.9% was applied to the *updated gross plant.* The Company contends that, until a future depreciation study is performed, it is reasonable and appropriate to use the composite rate, as this is used for both accounting and ratemaking purposes."

In the Lexington case, and in each streetlight purchase since the Lexington case, Boston Edison depreciated each *annual updated gross plant value*, since 1944, using Department approved depreciation rates, in the same fashion as is demonstrated in Exhibit DCM 3 in this proceeding. Town's Exhibit DCM 3 reproduces this set of gross plant values used by BECO to calculate the DTE 01-25 purchase price in the City of Waltham. (DCM 3 was also included in DTE 02-11 as Exhibit W 4). The recurrent use of this same set of gross plant values back to 1944 is evident from the following quote from DTE 02-11.

> "We note that BECo has produced similar documentation in a virtually identical format in the normal course of streetlight negotiations with other municipalities. See Joint Petition of the Towns of Acton and Lexington DTE 98-89 (1998) (Exh. Acton/Lexington 3, tables 3 and 4); Town of Stoneham Streetlight Conversion Notice to BECo at Appendix B (May 7, 2000) . . . We find this exhibit is authentic, relevant and that we can rely upon it in resolving this dispute."
>
> (DTE 02-11 p 6.)

This same use of the annually updated gross plant values is described in DTE 01-25, and is referred to as "each vintage group of streetlights".

> "Boston Edison Company adopted a similar method . . .to calculate unamortized investment in the streetlights for the towns of Acton and Lexington, as demonstrated in Exhibit Acton / Lexington – 3, tables 1-4 from DTE 98-89. In DTE 98-89, BECO

> calculated its accumulated depreciation figure by *depreciating each vintage group of streetlights* using department approved depreciation rates for streetlights. . .”
>
> (DTE 01-25 p 6.)

DTE 01-25 permitted one very limited deviation from the use of this set of book values, and in so doing, clarified the definition of gross plant. (The deviation from the use of gross plant book value related to a distinction between gross plant investment values derived from service territory wide retirement values, and gross plant investment values derived from community specific retirement values. In this case, the gross plant values used on Mass Electric books for property tax reasons are based on community specific retirements. Consequently, the deviation from gross plant book value is not authorized by the facts in this case. The Department stated in DTE 01 25 as follows:

> “Consistent with the Boston Edison method, had Commonwealth provided town-specific information on early retirements, those costs should have been factored into the calculation of the company’s unamortized investment in the Town’s streetlights. *In the absence of town-specific data on the cost of early retirements, unamortized investment shall be determined by subtracting the accumulated depreciation from the original cost of the community’s streetlights being acquired.*

This clarification regarding the two elements of gross plant investment, community specific original installed costs and community specific retirements is important, because it identifies a major problem with the Mass Electric streetlight valuation in this case.

If Mass Electric is going to follow the precedent set in DTE 98-89 and DTE 01-25, Mass Electric would use as the bedrock starting point for any calculation of streetlight book value, the set of gross plant values dating back to 1963, that appear on the Company’s general ledger books, which set of gross plant values should be used by the Company for both streetlight sale and property tax and general accounting reasons. That set of gross plant values since 1963 should be the annually calculated gross plant values described in the Company’s response to Information Request 1-4. Annual additions and annual retirements are monitored and used to readjust the prior year’s gross plant investment.

The first problem with the Mass Electric streetlight valuation in this case is that the set of gross plant values used for streetlight valuation does not reflect the original installed cost of the streetlight equipment installed in each year since 1963 in the vintage year in which the investment was made. Mass Electric claims that DTE 01-25 mandates a new set of gross plant values of streetlight gross plant investment that shifts the investment in brackets and foundations to 1980 and 1983 respectively, rather than the year in which the investment was made in brackets and foundations.

> “ However, the transfer of gross plant investment from the single PUC to the new bracket PUC was recorded as a single vintage year and did not recognize the vintage year of the original investment. The Company took similar steps with foundations in 1983. . . Mass

Electric does recognize that pursuant to DTE 01-25, the Company may not be providing the petitioners with all of the depreciation associated with this investment."

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Mr. Moody, the Towns' professional witness, explains the import of these two separate and distinct processes for calculating book values, one being the set of annual reconciliations of gross plant value based on the additions activity and retirement activity in that year, and the other being the 40 year look back process, which the Company claims was mandated by DTE 01-25. The context for the question posed to Mr. Moody, was the difference between 1997 gross plant value for tax purposes and the 1997 gross plant value for sale purposes.

Q. Do you have any other observations about these two different 1997 book values?

A. Well one observation I get is I gather that the book value for property tax purposes comes from the company's general ledger and is a product from that ledger of all the ins and outs and accounting activity that's gone on over the years in any years affected by all that previous activity. Whereas the net book calculated for sales price purposes or purchase price purposes is an excerpt of only the additions and retirements as they appear in those years from that book, without necessarily bringing the history of those entries with them.

(Transcript p. 285)

The Towns contend that, "the book value of the gross plant in service" as that term is used in DTE 01-25, is the book value of the gross plant in service that in Mr. Moody's words, "comes from the company's general ledger and is a product from that ledger of all the ins and outs and accounting activity that's gone on over the years". By design, the book value of the gross plant in service, for property tax purposes, from the Company's general ledger, captures all of the activity, including all of the retirement activity, from all of the prior years. By design, the book value of the gross plant in service, for tax purposes, places the additions regarding streetlight brackets and foundations in the year they were first installed and recorded for tax purposes. The starting point for the 1980 tax calculation, for example, is the 1979 calculation, and just shows the "ins and outs" or "adds and retires" over the past year. By design, the brackets and foundations would be included and captured in this annual reconciliation process and be recorded in the vintage year in which they were installed. Whereas the new two year old formula and the 40 year look back process only sees the transfer year of 1980 for brackets, and the transfer year for foundations.

**2.2 Gross investment in brackets and foundations missing from 1963 carry-over year**

The Company has acknowledged that the gross plant investment values, for "sale purposes", only includes additions related to brackets as of 1980 and after, only includes additions related to foundations as of 1983 and after. See, for example, the cross examination of the Company's witness at page 443 of the hearing transcript:
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Q. On page 29 of your testimony, you say, "The balances reported by AMS as vintage year 1963 actually include all pre-1963 additions that have not been retired." Can you find that?" . . .

Q. Is that true with respect to brackets that existed prior to 1963?

A. Brackets have not been retired. They're included in our current plant investment.

Q. My question is if they're included in the 1963 vintage year balances?

A. No, they would not be. They're in the 1980 vintage.

Q. Are the foundations included in the 1963?

A. No.

2.3 Gross Investment and Brackets and Foundations missing from 1963 to 1979 and 1963 to 1982 respectively

The gross investment in brackets and the gross investment in foundations are missing from all of the years between 1963 and 1980 for brackets, and for all of the years between 1963 and 1983 for foundations. This is the case with respect to both communities.

With respect to the existing plant in Franklin, a quick glance at page 171 of MECO Exhibit 7, shows that there are no values for brackets in any of the years between 1963 and 1979, in Franklin. The first entry for any brackets in Franklin is the 1980 entry of $8,363 for brackets at the very top of page 171, in vintage year 1980. Similarly, if you look at pages 170 and 171, you will see that there are no dollar values in the Gross Plant Investment column for any foundations between 1963 and 1982. The first entry for foundations is the 1983 entry of $12,987 for foundations, in Franklin. While the data in Swampscott is organized differently, a similar review of the Swampscott data, at page 191 of MECO Exhibit 7, shows a) that the earliest record of any gross investment in brackets in Swampscott was the $74,044 shown as vintage year 1980, and b) the earliest record of any gross investment in foundations is the $5,263 shown as vintage year 1983, also on page 191. The only equipment shown in the gross investment column in Swampscott in the years between 1963 and 1979 is the overhead conductor and underground conductor shown on page 190 of MECO exhibit 7. (In addition, there are two entries in 1978 and 1979 for dedicated poles at the top of page 191, and one 1979 entry for mercury fixtures at the top of page 192).

2.4 Problem of transfer year vs. installation year impacts retirement values as well

The problem of using the transfer year of 1980 for brackets, as opposed to the original installation year for these brackets, and the transfer year of 1983 for foundations, as opposed to the original installation year for these foundations, is not limited to the existing plant values. The

same incorrect assumption of 1980 and 1983 as the assumed vintage year for brackets and foundations impacts the retirement record as well. The Company explained in response to Information Request 1-9 that they used two sources of information to populate the retirement record.

> " The retirement data used in the Company's streetlight pricing process was obtained from two sources. The Company was able to locate annual hard copy computer reports, that detailed all of the Company's retired assets by company, account, town, PUC, vintage year, and retirement value. The retirement year was based on the report year. These reports were available for the period 1964 to 1993. . . retirement activity for the period covering 1994 to 2003 was obtained from the Company's mainframe activity tables that are a component of the Asset Management System. . ."

This reliance on two different sources for the retirement values explains the concentration of 1980 vintage year assumptions for bracket retirements, and the concentration of 1983 vintage year assumption for foundations in the retirement record. The annual retirement reports apparently captured the information from those annual reconciliations of gross plant value, which included the original installation year of the retired asset in the actual year of installation. However, for retirement activity after 1994 the purchase price model relies on the retirement record in "the mainframe activity tables that are a component of the Asset Management System." This later source of retirement information only captures the transfer year for brackets and foundations, as opposed to the installation year.

Note for example, the $63,352 worth of bracket retirements with the assumed installation year of 1980 in the Franklin retirement record (MECO Exhibit 7 page 176, thirteen entries with 1980 vintage year). In the same MECO exhibit 7, you see a similar concentration of sixteen 1980 vintage year entries in the Swampscott retirement record at page 199, a similar concentration of vintage year 1983 entries for foundation retirements at pages 174 of the Franklin retirement record, and page 198 of the Swampscott. retirement record. The impact of this error regarding the vintage year for brackets and foundations is to eliminate depreciation on these brackets in the same fashion and for the same reasons as it is eliminated from the existing plant data base. When the Company said, "the Company may not be providing the petitioners with all of the depreciation associated with this investment", this comment was not limited to the existing plant data base.

2.5 1997 gross plant investment for tax is different from 1997 gross plant for sale

The record in this proceeding demonstrates conclusively that the set of gross plant investment values used by Mass Electric for property tax compliance reasons in 1997 is different from the set of gross plant investment values used to calculate the streetlight sale purposes. No such deviation is authorized by DTE 01-25.

See for example, the testimony of the Towns' professional witness, Mr. Moody, at page 284 of the hearing transcript, in which the witness is describing the differences in 1997 book values for tax purposes and sale purposes, as summarized in Town exhibit DCM 4, Table 4.

Q. “What observations do you make regarding the comparison of these two 1997 net book value calculations?

A. Well, there are differences. The largest difference of the three columns is in the net plant column, which amounts to some $111,990, which that difference is split between the gross plant, first column and the middle column, reserve.”

The differences referred to by Mr. Moody are reproduced in DCM 4, and summarized below:

Comparison of Franklin Tax Book Value and Sale Book Value as of 1997

	Gross Plant	**Reserve**	**Net Plant**
Sale Values	$734,598.	$10,685.	$723,913.
Tax values	$721,783	$109,860	$611,923
Difference	**$ 12,815**	**$ 99,175**	**$111,990**

The above described difference of $111,990 is comprised of two components, the $99,175 difference in accumulated depreciation, and the $12,815 difference in gross plant. We will discuss the Company’s approach to depreciation shortly. For the moment we are focused on the $12,815 difference in gross plant values.

We can find no authorization in DTE 01-25 for the use of two different sets of gross investment values, one on the Company’s general books, and a different, special, and unique set of gross investment values for the purpose of establishing streetlight book value.

We believe that DTE 98-89, DTE 01-25 and the statute all stand for the same bedrock assumption that the net value of streetlights starts from the common bedrock starting point of one common set of gross investment values, and these gross investment values need to reflect the original cost of streetlight equipment (brackets, fixtures and foundations) in the year in which those original investments were made. There is no justification for using a newly recalculated set of gross plant values that shifts the gross investment in brackets and foundations to 1980 and 1980 and 1963 respectively. There is no justification for two different sets of gross plant values in 1997, one for tax reasons and the other for sale reasons. DTE 01-25 is not invitation to realign the historical gross plant values in the fashion that the Company has realigned those historical gross plant values.

The fact that the realigned gross plant values both add up in the final year of 2003 to the same gross plant value does not cure the problem of the missing depreciation associated with the use of the transfer year for brackets and foundations rather than the original investment year. The existence of the one common set of community specific gross plant values that was used for tax purposes, and apparently also used as the starting point for the Company’s calculation of

purchase prices under the so called "prior method," raises a fundamental question as to why the Company has seen the need to recalculate a new group of inaccurate gross plant values.

2.6 The Company cites the ruling in DTE 01-25 as the basis for its right to realign gross plant values

The Company attributed the entire $111,990 difference (which is comprised of the $12,815 difference in gross plant values as well as the $99,175 in accumulated depreciation) between the 1997 tax value and sale value as the result of the fundamentally different valuation rules established for streetlight valuation reasons in DTE 01-25 in the Company's Answer to the Towns' Petition at paragraph 56.

> "the reason for the $111,990 difference between the unamortized investment on the Company's tax books and the unamortized investment calculated for streetlight sale purposes is due to the fundamental differences between the calculation of the unamortized investment of the streetlights consistent with DTE 01-25 and that used for property tax reporting purposes."
>
> (Company's Answer paragraph 56)

In his testimony at page 34 and 35, the Company's witness, Mr. Currie, attributed the problem with regard to using the transfer year rather than the "the vintage year of the original investment" to the rules change in DTE 01-25:

> " However, the transfer of gross plant investment from the single PUC to the new bracket PUC . . .did not recognize the vintage year of the original investment . . .Mass Electric does recognize that pursuant to DTE 01-25, the Company may not be providing the Petitioners with all of the depreciation associated with this investment"
>
> (Currie testimony page 35)

In response to DTE Record Request 1, the Company attributes the problem with the inaccurate vintaging of the brackets and foundations, and the associated missing depreciation for the period prior to the transfer year, to the rules change in DTE 01-25:

> " In DTE 01-25 the department ruled that the purchase price can only include values that are known and municipality specific. The Company does not know for certain how much depreciation it had already taken on the brackets and foundations prior to reclassifying them from the mass plant account to their own sub accounts, and thus does not believe it would be proper to include an estimate."
>
> (Record Request DTE – 1 p 1.)

And finally in response to the Town's Information Request 1-3, in attempting to justify the refusal to provide the information requested, which included an information request for gross plant balances calculated for tax reasons in 1962 and 1963, the Company stated:

> "The Company has explained in the past, most recently at the technical session held on January 29, 2004, that pursuant to DTE 01-25, the methodology for determining net book value for the purpose of pricing streetlights is completely different from what is done for property tax purposes."

The Towns do not believe there is any language in DTE 01-25 or any invitation in DTE 01-25 that would permit the realignment of the annual set of gross plant values, in the fashion proposed by the Company in this proceeding.

To the contrary, the Towns believe the clear language of DTE 01-25 (and DTE 98-89 and the statute) requires the use of the original cost, in the vintage year in which it was installed. The Towns believe that the only deviation permitted by DTE 01-25 from the gross plant values calculated over time, as they appear on the general ledger, is the deviation associated with the use of community specific retirement data in the place of territory wide retirement data, in the calculation of the annual gross investment values, to which the historical depreciation is applied. Since the Company has acknowledged that the gross plant values for both tax and sale both reflect Franklin specific retirements, the limited deviation permitted by DTE 01-25 is not applicable in this case.

See for example, the exchange at page 487 and 488 of the hearing transcript, in the cross examination of the company's witness, Mr. Currie, in comparing and contrasting the tax gross investment and sale gross investment:

> Q. Does the gross plant investment and the retirement information and the additions information in Franklin reflect the same Franklin specific additions and the same Franklin specific retirements as is true for this purpose (tax purpose), for sale purpose?
>
> A. We get our information from the same source, asset management. It would be the same.
>
> Q. So both values include Franklin specific retirements?
>
> A. To the extent there's Franklin specific activity that affected the gross plant investment, it would be included in both numbers. . . .
>
> Q Does either reflect service territory wide retirements?
>
> A Can you define that please?
>
> Q. Retirement in some other community impacting Franklin?
>
> A. That would not happen. Gross plant investment is specific to the community.

DTE 01-25 does not stand for the proposition that Mass Electric has a unique invitation, to recalculate gross plant values, and shift gross plant values, using a two year old streetlight valuation model that conveniently shifts gross plant values in order to understate depreciation.

2.7 The fact that the 2003 gross plant balances are the same does not address the problem inherent in two sets of plant values, both of which add up to the same gross plant balance in 2003.

In spite of our request for Department assistance in securing a response to the Towns' Information Request 1-3, the Company has yet to provide a response to Information Request 1-3, that would permit a side by side comparison of the 1963 gross plant values for both tax and sale purposes.

In spite of numerous requests from the Towns for the annual gross plant values, the annual additions and annual retirements, over the past year, the Company has consistently refused to disclose that information.

The Company has asserted that the gross plant investment values for tax purposes and sale purposes are identical, *in the year the calculation regarding the streetlight value was made.* The Company was unwilling to make the same statement under oath, regarding the set of gross plant values that add up over 41 years to that current year gross plant value. See for example, the following exchange in the cross examination of Mr. Currie at page 485 and 486 of the hearing transcript:

> Q. So as far as you know, the two sets of gross plant investment numbers could be different.
>
> A. I know that the total gross plant investment that we have on hand today, specifically using December 2003 or 2002, reconciles to exactly what we report for property tax purposes for that same year.
>
> Q. And I would grant you that. I think I agree with that. That's not my question. My question is, if you looked at two sets of gross plant investment values going back to 1963, one driven by this data, annualized in the way that the community asked for it, and the other looking at 40 sets of gross plant investment done each year on an annual basis, if these two sets of gross plant investment would be the same or different.
>
> A. I don't know what was done for property tax purposes in 1960 or 1963 or 1965.

Or, when the same question was posed beginning on page 482 of the hearing transcript, the following exchange took place:

> Q . . . Does that mean that when you've reconciled it to your gross plant investment, that the number totals in 2002 are the same gross plant investment you have in the books – for tax reasons, for example? Are the two numbers the same?

A. . . . the information we reported for streetlight purposes as of December 2003 for gross plant investment would agree to what was reported for property-tax purposes at December 2003, and that also would ultimately agree to our financial records . . .

Q. Is that also true for 1963?

A. Can you be more specific?

Q. Would the gross plant investment shown in this calculation as of 1963, that you've testified is missing brackets, is missing foundations, is missing other stuff installed before 1963 – would that gross plant investment for 1963 tie back to the gross plant investment done for tax records.

A. It seems unlikely, since we retired – had 30 years of retirement since that point in time.

And when the Hearing Officer asked the exact same question whether the 1963 gross plant balances for tax and sale reason would be the same, Mr. Currie responded:

Witness Currie: I don't know.

Mr. Stiefel: You don't know? Is that your answer?

Witness Currie : Yes.

If the Company cannot state that the 1963 gross plant value for tax reasons on the Company's general ledger is equal to the 1963 gross plant value used for sale reasons, the Company cannot state that it has offered a streetlight valuation that complies with DTE 01-25, DTE 98-89, or the statute.

2.8 It has been difficult to get information from the Company on this issue

When the Towns raised the issue of assumed vintage of 1980 for brackets in the Towns Information request, the Company response included the following:

"There was no impact on the Company's financial records from a town balance or net book perspective, since the separate tracking of brackets simply represented a reclassification / transfer of existing plant"

(Company's response to Information Request 1-6)

The Company only acknowledged the significance of the discrepancy regarding the use of the transfer year for brackets and foundations, as opposed to the original installation year, ("the Company may not be providing the petitioners with all of the depreciation associated with this

investment" Currie p 35) after the Towns' professional witness testified regarding the significance of this issue at the February 25 hearing:

> "Well on observation I get is I gather that the book value for property tax purposes comes from the company's general ledger and is a product from that ledger of all the ins and outs and accounting activity that's gone on over the years in any years affected by all that activity. Whereas the net book calculated for sales price purposes is an excerpt of only the additions and retirements as they appear in those years form that book, without necessarily bringing the history of those entries with them."

The Company's response to Information Request DTE 1-3 did not explain the Company's interpretation of DTE 01-25 as it related to the shifting of gross plant values to reflect the transfer year as opposed to the original installation year, and the impact of this "DTE 01-25 mandated change in the formula", that resulted in the missing depreciation. The elimination of historical depreciation on brackets and foundations, associated with the device of using the transfer year, appears to be one of the major distinguishing features of the Company's new two year old formula.

2.9 The shifting of the gross investment for brackets and foundations to 1980 and 1983 respectively has a significant impact on the net value calculation.

The understatement of the gross plant investment for brackets in the years prior to 1980 and for foundations in the years prior to 1983, means that the "sale book value" calculation is missing the depreciation on the brackets and the foundations for all of the years prior to 1980 in the case of brackets and all of the years prior to 1983 in the case of the foundations, in both communities.

This is not an insignificant problem. A comparison of the unit values, in the Company's retirement record, for the mercury fixtures installed in Swampscott, to the unit values for brackets in the Company's retirement record in Swampscott, illustrates the magnitude of the problem in both towns. (The unit values are similar in both towns.) The following chart reproduces the unit values used in the Company's retirement records for brackets and the 4200 lumen fixtures that those brackets were supporting in Swampscott, as well as the unit values for foundations and the dedicated poles that those foundations were supporting in Swampscott. (See pages 50 to 53 of Ex AWM 3, the actual page numbers for each piece of equipment is reproduced in column 6 below.)

Equipment	**Lowest Unit Value**	**%**	**Highest Unit Value**	**%**	**Exhibit AWM 3**
4200 lumen fixture	$74.76	55%	120.63	60%	pp 52, 53
Bracket	$61.99	45%	81.10	40%	pp 51, 52
Total installation	$136.75	100%	201.73	100%	
Dedicated pole	223.19	61%	514.96	54%	pp 50, 51
Foundation	139.79	39%	439.95	46%	p 51
Total Installation	362.98	100%	954.91	100%	

The ratio of bracket cost to fixture cost depends on the fixture that you choose to make the comparison. In the time frame in question, the predominant fixture in Swampscott was the mercury 4200 lumen fixture. (See for example, Table 6 in Exhibit AWM 1. The $69,348 in mercury fixture installations represented approximately 924 of those fixtures at the unit prices used by MECO and reproduced in Exhibit AWM 3). Using the 4200 mercury fixture as the basis for the comparison, the above chart demonstrates that the bracket represents a significant fraction of the overhead streetlight installation, (ranging from 45% to 40% of the total overhead installation). The above chart also demonstrates that the foundation represents a significant fraction of the dedicated pole installation (ranging from 39% to 46% of the total underground installation). The ratio of foundation cost to dedicated pole cost is less sensitive to the equipment chosen, because, unlike fixtures, there is much less variety in the choices for this type of equipment. You will note for example, that the company only quoted one installation cost for the dedicated pole installation in response to DTE Information Request 2-2, as opposed to the multiple quotes for different sized fixtures.

The point of the above chart is not to establish with certainty the exact ratio between fixture costs and bracket cost, or the exact ratio between foundation costs and dedicated pole cost. The point of the above chart is to demonstrate that brackets and foundations represent a significant fraction of the total overhead installation and underground installation, respectively. Consequently, the use of a formula that shifts the date of the investment in brackets and foundations can have, in this case does have, a significant impact on the end result.

To approximate the dollar value of the missing depreciation associated with shifting the gross investment in brackets and foundations into later years, we need to look at the two categories of plant value provided by MECO: existing plant values and retired plant values.

Missing depreciation in existing Plant Data

As we have already indicated in section 2.3 above, there are no gross investment values for brackets in either community in any year between 1963 and 1980 or for foundations in either community in any year between 1963 and 1983.

We do not know for how many years prior to 1963 the problem of the missing depreciation on the gross plant investment related to brackets and foundations persisted. But we do know that for at least the 17 years between 1963 and 1979, the Company's new two year old formula omits depreciation on 40% and 45% of the total cost of an overhead installation (i.e. brackets). And we do know that for at least 20 years between 1963 and 1982, the Company's new two year old formula omits depreciation on 39% and 46% of the total cost of an underground installation.

The problem of the missing depreciation on existing brackets and existing foundations persists for as any many years prior to 1963 that existing brackets or existing foundations were installed in either community.

The retirement record provides some pretty good clues regarding the original vintage year of the brackets in both communities. Exhibit JDN 2 (page 20 of the Nutting testimony, excerpt from the Brite-Lite Report) includes the following regarding the bracket retirement issue:

> "The old incandescent fixture was supported by a different type of bracket. Consequently the conversion from incandescent to mercury would require a new bracket to be installed. On the other hand, mercury and sodium fixtures are supported by the same type of bracket. It would not be normal to change out brackets when converting from mercury fixtures to sodium fixtures"

We know from the retirement record in Swampscott, that $69,348 worth of mercury 4200 lumen fixtures were installed in Swampscott in 1950 (see page 54 of AWM 3) and retired in Swampscott in 1989. We also know that this represented somewhere between 890 and 924 fixtures depending on the unit price used as reported by MECO. (See page 53 of AWM 3 which is the sort of the Mass Electric Swampscott data to show unit prices.) And we know that MECO reported $74,044.39 of gross plant investment in Swampscott as vintage year 1980 investments, even though acknowledging that these brackets were actually installed earlier. At the 1980 unit price of $81.10 (reported by MECO in the middle of page 53 of AWM 3, or alternatively the middle of page 199 of MECO exhibit 7), this equates to 913.001 brackets.

The Town of Swampscott believes it is reasonable to assume that the 913 brackets were probably installed at the same time that the 890 to 924 mercury fixtures were installed, namely 1950. Prior to 1950, the retirement record in Swampscott indicates that the predominant fixture was the incandescent fixture. See for example, page 458 of the transcript in the cross examination of Mr. Currie:

> Q. "Do you see any evidence earlier than 1950 of those types of mercury installations in this retirement record? . . .
>
> Q My question is this: Is it reasonable for the Towns to look at this retirement record and assume that the installation of $69,000 worth of mercury fixtures in 1950 and $40,000 in 1955 replaced many of the fixtures that you see having been installed of the type that are shown in the first three pages of this record.
>
> A. I think it is fair to say that if there was a conversion that took place in the 50's that was replacing the technology that was existing at the time, then there would have been retirements of that pre-existing light technology"

We do not know, and cannot know for sure what year the brackets, that are currently shown as having been installed in 1980, were actually installed. However, the incongruous result, that the brackets apparently sprouted under the existing mercury fixtures in 1980, which fixtures were installed in 1950 and retired in 1989, is what caused the Town to question the 1980 entry in the first place. We believe an assumption that these brackets were installed at the same time as the fixture that they support were installed, is a far more reasonable assumption than the assumption embedded in the current Company purchase price formula, namely that the fixtures were suspended in mid air, and the brackets sprouted in 1980. The fact that the Company's retirement

record also supports the conclusion that the mercury installations in 1950 replaced incandescent fixtures that had been the predominant light technology up until 1950, also supports the Town's conclusion. If the Brite-Lite report is correct, the conversion from incandescent to mercury is the type of conversion that would typically give rise to a change out of the brackets.

The vintage year of 1950, as the likely installation year for these brackets in Swampscott, is supported by the Company's own data. The vintage year of 1980 is contradicted by the Company's own data. For example, there is companion installation of fixtures in 1980, and there is no companion retirement of the brackets that were supposedly replaced in 1980.

Missing depreciation in the Retired Plant Values

The problem of missing depreciation is not limited to the unamortized values in the existing plant. The same incorrect assumption regarding 1980 as the vintage year for brackets, and 1983 as the vintage year for foundations, impacts the unamortized values calculated for retired plant as well. Section 2.4 above cites the references to pages 174 and 176 of the Franklin retirement record, and pages 198 and 199 of the Swampscott retirement record, and the concentration of retirement values for brackets with an assumed vintage of 1980 and the concentration of retirement values for foundations with an assumed vintage of 1983.

In the case of Franklin in particular, there is a significant volume of bracket retirements, amounting to $63, 352 of bracket retirements with the assumed vintage of the transfer year of 1980. More than $60,000 of that amount represents brackets retired in the 1990 to 1995 time frame, the years coinciding with the sodium conversion in Franklin. (See page 176 of MECO exhibit 7). In the case of Franklin, there is a coincident installation of new brackets in the same time frame, as the retirement of the old brackets. The challenge in estimating the actual vintage of the retired brackets in Franklin is to find a significant volume of incandescent fixture retirements, retired in the same time frame that the brackets were retired. If the information from the Brite-Lite report is accurate, the conversion from the incandescent fixture and the old type bracket is the normal cause of a bracket change out. (The new style bracket can support either the sodium or the mercury light. The incandescent fixture had a different type of bracket. See Brite Lite Report at Exhibit JDN 2 page 20. The retirement of brackets in Franklin in the 1990's would imply the retirement of incandescent fixtures, with their older style brackets, at the same time. Consequently we reviewed the retirement record to see if we could find the retirement of incandescent fixtures coincident with the retirement of the brackets.) The original installation dates of those incandescent fixtures are the likely installation dates of the retired brackets as well.

That search of the retirement record in Franklin indicates that $13,124.26 of incandescent fixtures with installation dates between 1941 and 1955, were retired in Franklin in the years between 1990 and 1993, the years coinciding with the sodium conversion in Franklin, also coinciding with the years of the bracket retirements referred to in the above paragraph. (See 26 retirement entries at page 183 and 184 of the MECO exhibit 7, for the PUC grouping 3739302, Incandescent fixture with Enclosed Glass, which 26 entries are organized first by vintage, and within vintage groupings by retirement year). Those same 26 indicate unit values of $19.42 and $20.40 as having been used by MECO in the 1940's 1950's for these incandescent fixtures. At

those unit prices, the dollar volume of incandescent fixture installations between 1941 and 1955 would support 643 fixture installations.

Again our point is not to prove with certainty that the 700 plus bracket retired at the time of the sodium conversion had actual installation dates between 1941 and 1955. We don't believe it is the Town's burden to prove with certainty or even a preponderance of the evidence, what these installations might have been. We believe that is more appropriately the Company's burden.

Our only point is that the assumption that the brackets retired in the early 1990's had the same installation date as the incandescent fixtures retired in the early 1990's is a much more reasonable assumption than the assumption used by MECO. The MECO assumption is that they simply don't know, so they will assume the date that they know is wrong, namely the transfer date in 1980. It is hard to imagine a more inequitable assumption.

The following chart show the significant impact of the recently disclosed MECO assumption, that brackets were installed in 1980 and 1983, even though both dates have been acknowledged by MECO to be wrong. All of the information in the first four columns comes directly from the MECO purchase price data. The dollar values in columns 3 and 4 are footnoted to reflect the page reference in the MECO documentation where those dollar values are reported. Column 5, computes the missing depreciation if you assume that the brackets and foundations were installed in 1963, and represents the depreciation missing between 1963 and 1980 for brackets, or between 1963 and 1983 for foundations. Column 6 represents the missing depreciation if you assume that the actual installation date for the brackets and the foundations was 1950, an assumption that is supported by the retirement record in both communities.

Equipment	**Vintage**	**Gross Investment**	**Depreciation forward**	**Depreciation to 1963**	**Depreciation to 1950**
Franklin					
Foundation Exist.	1983	12,987 (1)	13,331 (1)	10,389	17,142.
Foundation Retired	1983	702 (2)	653 (2)	561	926
Brackets Exist	1980	8,363 (3)	9,704 (3)	5,686	10,035
Brackets Retired	1980	63,352 (4)	40,555. (4)	43,079	76,022
				59,715	104,125
Swampscott					
Foundation Exist.	1983	5,263 (5)	5,403 (5)	4,210	6,947
Foundation Retired	1983	1,754 (6)	1,133 (6)	1,403	2,315
Brackets Exist	1980	74,044 (7)	85,913 (7)	50,349	88,852
Brackets Retired	1980	4,075 (8)	3,148 (8)	3,260	4,890
				59,222	103,004

Source: (1) MECO ex 7 page 170 (foundation existing plant values)
(2) MECO Ex 7 page 174 (sum of foundation retired plant values)
(3) MECO ex 7 page 171 (Bracket existing plant values)

(4) MECO ex 7 page 176 (sum of bracket retired values)
(5) MECO ex 7 page 191 (foundation existing plant values)
(6) MECO Ex 7 page 178 (sum of foundation retired plant values)
(7) MECO ex 7 page 191 (Bracket existing plant values)
(8) MECO ex 7 page 199 (sum of bracket retired values)

To calculate the missing depreciation back to 1963, we used the MECO formula for calculating the reserve. For example, we multiplied the number of years of missing depreciation (i.e. the 17 years between 1963 and 1979 for Brackets, and the 20 years between 1963 and 1982 for foundations) times the assumed depreciation rate of 4% (17 x .4, or 20 x .4) to arrive at the "Reserve Ratio" for the missing years only (.68 for brackets, and .8 for foundations). We then multiplied the "Reserve Ratio" for the missing years times the Gross Plant Investment recorded by MECO as Gross Investment for vintage year 1980 brackets or vintage year 1983 foundations (column 3 value in the Table) to arrive at the missing depreciation for the missing years back to 1963. This missing depreciation is shown in Column 5 above. We used the same formula in column 6, except the installation year is 1950 as opposed to 1963.

In the context of the purchase prices in this proceeding, the Town's view is that $59,000 to $104,000 of missing depreciation is significant. The late disclosure that "Company may not be providing the petitioners with all of the depreciation associated with this investment" (Currie testimony page 35) is not reassuring. This is particularly so in light of the most recent Company response to Record Request DTE –1, which attempts to create the false impression that the estimate of the missing depreciation, (associated with the shifted gross investment values for brackets and foundations) in the response to that record request is reasonable. It is not.

2.10 The Company's reference to removal cost as a compensating credit for the missing depreciation associated with shifted gross investment values is neither persuasive nor relevant.

At page 35 of his testimony, Mr. Currie alludes to an estimated $100,000 in removal cost that have been gratuitously omitted from the capital cost in Franklin, and $80,000 in removal cost that have been gratuitously omitted from the capital cost in Swampscott. In response to DTE Record Request 1, he states that the omission of these removal cost should compensate for the missing depreciation associated with the use of the transfer year as opposed to the original investment year for brackets and foundations. The only thing we can say positively about this comment is that the Company has correctly identified the dollar magnitude of the missing depreciation problem.

Our first comment is that the statute does not invite the types of unilateral editing of the book values for streetlights on the Company's books, that the Company is implicitly stating they have the right to make. The whole concept of using unamortized investment, and one common set of gross plant investment values was to prevent the types of gamesmanship that this comment suggests.

Our second comment is that these types of removal costs are factored into the depreciation rates that are approved. Mr. Currie essentially acknowledges this point when he says:

> "However, the Company can estimate cost of removal based on recovery factors that were part of the company's approved depreciation rates."

Is the Company proposing a set of community specific depreciation rates? Is the Company proposing to refund to Franklin and Swampscott the portion of the depreciation already paid over the past 30 years, that relates to recovery of removal cost?

The only value that we see in the Company's comment on removal cost is that Company has, perhaps unwittingly, estimated the correct magnitude of the missing depreciation problem.

Section 3 - Depreciation

3.1 The generic ruling regarding depreciation in DTE 98-89 applies in this proceeding.

The specific depreciation rates employed in DTE 98-89 are specific to Boston Edison. However, the generic ruling in DTE 98-89 regarding the standard for the type of depreciation rate(i.e. streetlight specific depreciation rate) and the nature of that depreciation rate (i.e. one that reflects the useful life of streetlight equipment) apply generically to all utilities.

The Company acknowledges this point at page 47 of Ms. Burns' testimony.

> Q. Are there any other rulings applicable to the calculation of the purchase price?
>
> A. The only other pertinent order was in Docket DTE 98-89 (December 1998). . . In the order . . . the department ruled that the appropriate depreciation rate to be used to determine the reserve for depreciation related to street lighting equipment is the streetlight specific depreciation rate, not a composite depreciation rate reflecting all of a utility's plant investment"
>
> (Burns testimony p. 47)

We agree with the Company that DTE 98-89 is controlling with respect to the rules regarding depreciation, but the Company appears to be in some disagreement as to what those generic rules are.

3.2 Streetlight specific depreciation used to value streetlight equipment for sale must reflect the useful life if streetlight equipment

In DTE 98-89 Boston Edison applied two different depreciation rates to the gross plant investment for streetlights, in two different periods of time. Up until 1990, BECO applied a

streetlight specific depreciation rate of 5.9% to annual gross plant values for every year between 1944 and 1991. The basis of the pre 1991 Boston Edison depreciation rate was the 1990 Boston Edison depreciation study.

> "The Company states that the last time the depreciation reserve was allocated to streetlighting investment was a1990 depreciation study filed with the department as part of its general rate case."
>
> (DTE 98-89 p. 4)

The 5.9% rate was set at the level necessary to account for the accumulated depreciation in the streetlight account as of 1990 that was reported by BECO in the 1990 depreciation study. It is interesting to note that the record in this proceeding indicated that a streetlight specific depreciation rate of 4.94% had been determined in a 1982 Boston Edison depreciation study and yet the depreciation rate of 5.9%, the rate necessary to account for the accumulated streetlight depreciation reported by BECO in the 1990 depreciation study as of 1990, was used for all of the years from 1944 to 1991.

For the period after 1990, BECO had proposed to apply the composite plant distribution rate of 2.9% to the annual gross plant values after 1990.

> "For activity after 1990, the Company's composite distribution plant depreciation rate of 2.9% was applied to the updated gross plant."
>
> (DTE 98-89 p. 4)

Lexington and Acton complained that Boston Edison was understating the depreciation reserve by using a composite plant distribution rate of 2.9%. The Towns maintained that streetlights had a shorter useful life than the composite distribution plant in general, and that the deprecation rate used to value streetlights for sale should reflect that shorter useful life. The Towns proposed a streetlight specific depreciation rate of 5.9% in 1991 and then 5.27% thereafter to replace the 2.9% rate used by the Company for all of the years after 1990.

> "The Towns contend that streetlighting equipment has a shorter useful life than other distribution assets, and that streetlighting equipment depreciation rates must be greater than the rate used for all distribution plant . . .Therefore the Towns state that the composite distribution rate is not proper for determining the accumulated depreciation reserve for streetlighting equipment."
>
> (DTE 98-89 p 4)

The Department agreed with the Towns, stating at page 4 of the ruling:

> "Here the Act requires valuation of streetlighting equipment, and for the period from the last depreciation study, a valuation based on the composite distribution plant depreciation rate is not appropriate. *The Company must value streetlighting equipment based on a*

depreciation rate that recognizes the useful life of the streetlighting equipment. . .." (Emphasis Added)

(DTE 98-89 p 4)

The Petitioners in this proceeding do not believe that the exact same depreciation rates established in DTE 98-89 are required to be used by Mass Electric in this case. Those DTE 98-89 rates were determined using Boston Edison depreciation studies and Boston Edison specific depreciation rates. However, the generic aspect of the ruling does apply. The rule that the streetlight specific depreciation rate must reflect the useful life of streetlight equipment is a generic rule that applies equally to Boston Edison and Mass Electric.

Mass Electric has totally ignored that generic rule in this proceeding.

Mass Electric had made no effort to demonstrate that the streetlight specific depreciation rate of 4% assumed by the Company for the 50 year period prior to 1971, and used by the Company to calculate net value of the plant to be sold, reflects the useful life of streetlight equipment in the Mass Electric service territory in general, or in either community. The Company acknowledges that this 4 % rate has not yet been approved by the Department. The Company is essentially seeking approval of that 4% depreciation rate for the 50 plus years prior to 1971, from the Department in this proceeding.

The fact that the Company has been using an 8.13% streetlight specific depreciation rate throughout the service territory, currently, and has been using that higher rate for the past seven years, is at least implicit recognition that the lower depreciation rates (average rate between 1971 and today has been 5.06%) have been too low. If the Company's data regarding historic depreciation is credible, the 4% assumed depreciation rate proposed to be used in this valuation does not reflect the useful life of the streetlight equipment, today. If it did, there would be no reason to raise the depreciation rate to 8.13% for the past seven years.

At page 516 of the hearing transcript, the following exchange takes place in the cross examination of Ms. Burns.

Q. "Does the depreciation rate you're using reflect the useful life of streetlight equipment?

A. The depreciation rates that the Company is reflecting in its purchase price calculation are the rates that have been approved by the department in various base rate case proceedings. Therefore, those rates which are based upon the accounting life of an asset, do reflect the accounting life of the streetlight investment at the time the rates were approved."

(Transcript p 516)

The above quoted testimony of Ms Burns may be correct for the historic depreciation rates "approved by the department" beginning in 1971. There has been no such approval, to date, of

the 4% assumption for the 50 years prior to 1971. That approval is being sought by the Company today. There has been no demonstration by the Company that that 4% rate reflects the useful life of streetlight equipment today, or in any period of time.

In spite of the historic "under collection" of depreciation suggested by the Company's purchase price data in each community, and the historic under collection of depreciation throughout the service territory implicit in the new 8.13% rate, the Company is now proposing to use a 4% depreciation rate *assumption* for the 50 plus years prior to 1971. In spite of the historic "under collection" of depreciation suggested by the Company's purchase price data, the Company is now proposing to set this 50 year depreciation rate *assumption* at a level that is less than 80% of the historical average approved depreciation rates, and less than half the current streetlight depreciation rate. The Company simply asserts this assumed rate and makes no effort to demonstrate that the depreciation rate assumed comports with the "streetlight useful life" standard in DTE 98-89.

It is the position of the Petitioners, that the "under collection" of depreciation is more accurately described as an "under reporting" of depreciation. For the reasons described in section 2.8 above, the Company believes that the actual depreciation has been under reported due to the missing depreciation (which the Company has acknowledged) with respect to brackets and foundations. The Petitioners believe that the "under reporting" of depreciation associated with this phenomenon alone is in excess of $100,000 in each community. (See section 2.8 above.)

However, even if the understatement of depreciation, associated with brackets and foundations, is corrected, the fact still stands that the Company has seen the need to increase streetlight depreciation rates dramatically, throughout the service territory, in the last seven years. The 8.13% depreciation rate in effect today, to use Ms Burns' words, "reflects the accounting life of the equipment" today. This fact continues to represent implicit recognition that historically collected depreciation, even when corrected to reflect the missing bracket depreciation and missing foundation depreciation, has been too low, because the historic depreciation rates have been too low.

> "The Company must value streetlighting equipment based on a depreciation rate that recognizes the useful life of the streetlighting equipment . . ."
>
> (DTE98-89 p 4)

The Company has made no effort to support the *assumption* used by the Company that the depreciation rate for the 50 plus years prior to 1971 was, or should have been, or might have been 4%. The entire support for this assumption is contained in the closing line to the response to Information request DTE 2-1:

> " For streetlight depreciation rates prior to 1971, the Company assumed an annual depreciation of 4%"

3.3 The Company's yet to be approved assumed rate of 4% for the 50 years prior to 1971 significantly impacts retired plant values.

The unamortized value of the retired plant is very sensitive to this 50 year 4% assumption. In Swampscott, replacing the 50 year 4% assumption with the 5.27% rate adopted in DTE 98-89, the unamortized value of the retired plant in Swampscott drops from $61,704 to $11,913. And the entire $50,000 drop in the value of the retired plant impacts the pre sodium retired plant value in Swampscott, as opposed to the post sodium retired plant value in Swampscott. (See Town's Rebuttal Exhibit 4, and cross examination of Mr. Currie at pages 524 to 526 of the hearing transcript.)

The simple use of an assumed depreciation rate for the 50 years prior to 1971 that more closely tracks the average of the known depreciation rates for the 33 years after 1971, reduces the Company calculation of retired plant value in Swampscott by 80%. And all of that reduction impacts the pre sodium value of the retired plant, as opposed to the post sodium value of the retired plant.

The Petitioners believe that the Company has the burden to demonstrate that the depreciation rates used by the Company to value the streetlights, meet the "streetlight useful life" standard set out in DTE 98-89. The Petitioners believe that the Company has not met that burden in this proceeding with respect to the 4% assumed rate for the 50 years prior to 1971.

3.4 The Boston Edison Method is one approved method for calculating and applying depreciation in order to determine streetlight plant value under DTE 98-89 and DTE 01-25 and the statute.

Mass Electric has acknowledged on the record in this proceeding that DTE 01-25 did not impact or require any change in the Boston Edison Method used by BECo in DTE 98-89.

> Q "Would you be surprised if you found out that Boston Edison was calculating one price under both rulings in Waltham?
>
> A. I would not be surprised at all, because DTE 98-89 involved Boston Edison, and Waltham is in Boston Edison's territory, and *DTE 01-25 did not change anything Boston Edison was doing as it pertained to a calculation of a purchase price."* (emphasis added)

If DTE 01-25 "did not change anything Boston Edison was doing as it pertained to a calculation of a purchase price", that means that the "Boston Edison Method", is at a minimum, at least one acceptable way to calculate streetlight book value for streetlight sale purposes, *according to Mass Electric.*

DTE 01-25 cited with favor the "Boston Edison Method" for calculating a streetlight purchase price. See for example, the following description of the "Boston Edison Method" found in DTE 01-25:

> "Boston Edison Company (BECo) adopted a similar method to that used by the Towns to calculate the unamortized investment in the streetlights for the Towns of Acton and Lexington, as demonstrated in Exhibit Acton/Lexington-3 tables 1-4 from DTE 98-89. In

> DTE 98-89, BECo calculated its accumulated depreciation figure by depreciating each vintage group of streetlights using department approved depreciation rates for streetlights, and subtracting the cost of early retirements from the resulting accumulated depreciation figure for the Towns of Acton and Lexington. The reserve was then subtracted from the original cost of the streetlights to produce the net book value. Commonwealth and the Towns referred to this method as the 'Boston Edison Method'. The Boston Edison method appropriately included a community-specific depreciation reserve to value streetlights."
> (DTE 01-25 p 6)

The Petitioners in this proceeding reviewed the DTE 01-25 purchase price methodology used by Boston Edison in other communities, and discussed that methodology with their counterparts in other communities. The Waltham streetlight valuation was one of the DTE 01-25 valuations reviewed by both Town Administrators. The Waltham purchase price was prepared four months after the ruling in DTE 01-25, and was the subject of its own purchase price dispute, which was reviewed and settled by the department in DTE 02-11.

Exhibit DCM 3 is the purchase price detail prepared by Boston Edison and provided to the City of Waltham, to support the purchase of the streetlights in the City of Waltham. Exhibit DCM 3 in this proceeding, was also included as Exhibit W-4 in the Waltham purchase price dispute, (DTE 02-11) as a late filed document. In deciding to allow the Exhibit W-4 in the Waltham case, the department stated the following :

> "We note that BECo has produced similar documentation in a virtually identical format in the normal course of streetlight negotiations with other municipalities. See Joint Petition of the Towns of Acton and Lexington DTE 98-89 (1998) (Exh. Acton/Lexington 3, tables 3 and 4); Town of Stoneham Streetlight Conversion Notice to BECo at Appendix B (May 7, 2000) . . . We find this exhibit is authentic, relevant and that we can rely upon it in resolving this dispute."
>
> (DTE 02-11 p 6.)

It should be clear from the above quoted language that Exhibit W-4 in the Waltham proceeding (Exh. DCM 3 in this proceeding) was scrutinized by the department. It related to a purchase price prepared by Boston Edison on December 14, 2001, four months after the ruling was issued in DTE 01-25. (See page 7 of DTE 02-11): The Waltham ruling references the same exact tables, prepared in "virtually identical format" as were used in Lexington / Acton, as were referenced at page 6 of the ruling in DTE 01-25. The Waltham ruling also references tables in "virtually identical format" in Stoneham, the community where Mr. Nutting negotiated the streetlight purchase when he was the Town Administrator in that community. In short, Ex DCM 3 in this proceeding (also referenced as Ex W-4 in the Waltham case) is a documented demonstration of the application of the "Boston Edison Method" to calculate a DTE 01-25 purchase price.

The following is a side by side comparison of the DTE 01-25 formula used by Boston Edison in Waltham (and three other communities) and the DTE 01-25 formula proposed

by Mass Electric in this proceeding. The same table was presented by Mr. Nutting at the Hearing on April 13 and has been marked as Exhibit JDN 3A, Table 2.

Issue	**BECO DTE 01-25 Formula Boston Edison Method**	**MECO DTE 01-25 Formula New 2 Yr Old Formula**
Communities Reviewed	Chelsea, Natick, Waltham, (Stoneham)	Franklin, Swampscott
Gross Book Values	Same for tax and sale for all years	Different for tax and sale Understated 1963 to 1983 Overstated 1997 (Franklin)
Carryover Balance Accum. Depreciation	Set at 50% of correct gross investment in the carryover year	Set at 35% of understated gross investment in carryover year.
Assumptions Required	None	4% depreciation 1917 to 1963 No Brackets in 63 gross investment No Hist. depreciation exist plant No impact on depreciation from pre 1963 mercury conversion
Depreciation After Carryover Year	5.9% Rate is 100% above composite rate 1944 until 1971	4% Rate is 33% above composite rate 1963 to 1971
	100% of Gross Investment Depreciated Every Year	Understated Gross Investment Depreciated ’63 to ‘83
Net Book Result	Sale Value Less than Tax Value	Sale Value More than Tax value
DTE Approval	DTE 98-89, DTE 01-25, DTE 02-11	

An understanding of the two different DTE 01-25 formulas, used by Boston Edison and Mass Electric, as presented in the above chart is helpful in highlighting the issues in this dispute.

First, Boston Edison uses one common set of annual gross plant values, which is the same set of gross plant values for tax purposes and sale purposes for all years. This is distinguished from the Mass Electric approach, which includes the shifted and realigned gross plant values for brackets and foundations, which appear in the transfer year of 1980 and 1983. According to Mass Electric, this shifting of the gross plant values is mandated by DTE 01-25.

> “ However, the transfer of gross plant investment from the single PUC to the new bracket PUC . . .did not recognize the vintage year of the original investment . . .Mass Electric

> does recognize that pursuant to DTE 01-25, the Company may not be providing the Petitioners with all of the depreciation associated with this investment"
>
> (Currie testimony page 35)

If DTE 01-25 permits Boston Edison to use the community specific annual gross plant values from the Company's general ledger that are identical to the annual gross plant values used for tax purposes, why does the same ruling force Mass Electric to use a new two year old formula to look back 40 years and attempt to recreate this gross plant information. It strikes the Petitioners as much simpler, much more fair, and much more accurate, to use the community specific gross plant values available to the Company from the Company's tax records. We note that Ms. Burns has testified that the Company used this set of gross plant values in its "prior method".

> "This method (the prior method) was revised to reflect only the gross plant investment within a specific community . . ."
>
> (Burns testimony p. 52)

Everyone understands that the allocation of system wide reserve is not permitted. Every one understands that depreciation needs to be calculated. (The Petitioners believe that has been the rule since the Boston Edison Method of calculated depreciation was first demonstrated in DTE 98-89.) We fail to understand the need for the complicated creation of a new set of community specific gross plant values, to replace the much more accurate, and obviously available, set of community specific gross plant values. Where is the language in DTE 01-25 that requires this shifting of gross plant values, and why wasn't this approach mandated in Waltham? We cannot find any language that requires this approach. We believe the references to " the book value of gross plant investment" and "original installed cost" in DTE 98-89 and DTE 01-25 is referring to the "book value of gross plant" as it appears on the Company's books, and not to the new, complicated realignment of these gross values as proposed by the Mass Electric in this proceeding.

Second, Boston Edison estimates the historical depreciation in the carry over year (1944 in their case). Boston Edison uses an assumption that is designed to estimate what that historical depreciation might be. In every one of the reference BECO communities reviewed, the carry over reserve was set at exactly 50% of the correctly stated gross plant values in the carry over year. See for example, the following values in DCM 3:

1944 Carryover Year

	Gross Balance		Accumulated Depreciation	Source
Account 632	42,531.81	x.5 =	21,265.91	DCM 3 p 61 line 1
Account 635	44,585.43	x.5 =	22,292.72	DCM 3 p 67 line 1

The exact same 50% assumption regarding the carry over reserve is used in each of the BECO communities reviewed, as can be seen in the documentation attached to Towns' response to Record Response 5.

If DTE 01-25 permits Boston Edison to make a reasonable assumption regarding the carry over reserve in the carry over year, why does the same ruling force Mass Electric to clearly and unequivocally understate the carry over depreciation in the carry over year, as well as the bracket and foundation depreciation in the years between 1963 and 1980 or 1983 respectively?

> " In DTE 01-25 the department ruled that the purchase price can only include values that are known and municipality specific. The Company does not know for certain how much depreciation it had already taken on the brackets and foundations prior to reclassifying them from the mass plant account to their own sub accounts, and thus does not believe it would be proper to include an estimate."
>
> (Record Request DTE – 1 p 1.)

The carry over assumption used by Mass Electric in 1963 is that there was no historical depreciation accumulated on the plant existing in 1963, no depreciation accumulated on brackets until 1980, no depreciation accumulated on foundations until 1983. These assumptions are flat out wrong, and unfair. Where is the language in DTTE 01-25 that mandates this approach? And why doesn't DTE 01-25 have the same meaning in Waltham?

Third, the depreciation rate used by Boston Edison after the carry over year is a streetlight specific rate that has been determined by the Department in DTE 98-89 to reflect the useful life of streetlight equipment. In that case, the depreciation rate approved in the historical years 1944 to 1990 was twice the composite rate. Mass Electric on the other hand is seeking approval in this proceeding of a 4% depreciation rate assumption until 1971, which rate is 33% percent above the MECO composite rate, 80% of the average historical depreciation rates approved between 1971 and 2004, and half of the current MECO depreciation rate. Mass Electric is seeking this approval of this 4% depreciation rate assumption without any showing that this 4 % rate reflects the useful life of streetlight equipment.

We do note that the use of a reasonably estimated assumption for the carry over reserve in 1963, could substantially mitigate the inequity of the 4% assumption between 1915 and 1971. Such a reasonably estimated assumption regarding the carry over reserve in 1963 could also eliminate the concerns regarding the excess depreciation associated with the likely mercury conversion in 1950 in Swampscott.

Fourth, because Boston Edison used one common set of gross plant values, and then applied a higher streetlight specific depreciation rate to that one common set of gross plant values, the result in the four communities reviewed was a net plant value for sale that was less than the net plant value for tax purposes. See for example, the Nutting Cross examination at page 589 of the transcript:

> Q "Do you have other concerns about the overall plant value?

A. I do have concerns about the overall plant value, because when I look at other communities . . .I have several issues: A) they start with one set of gross numbers and at the end . . . the streetlights are less for sale than they are for tax because of the depreciation schedule."

If DTE 01-25 is being used to produce net book value calculations for streetlight sale purposes in the reference communities reviewed that are less than the net book value for tax purposes, what is it about Mass Electric's interpretation of DTE 01-25 that is yielding such a dramatically different result in Franklin?

"the reason for the $111,990 difference between the unamortized investment on the Company's tax books and the unamortized investment calculated for streetlight sale purposes is due to the fundamental differences between the calculation of the unamortized investment of the streetlights consistent with DTE 01-25 and that used for property tax reporting purposes."

(Company's Answer paragraph 56)

3.5 DTE 01- 25 should not be interpreted to permit dramatically different "net book values based on the whim of the particular utility.

All parties agree that the Boston Edison Method is at least one permissible formula for calculating the net book value of the streetlights in a fashion that is fully in accord with the ruling in DTE 01-25. We have re-calculated the Franklin and Swampscott purchase prices using the Mass Electric gross investment data, adjusted to reflect the bracket gross investment and the foundation gross investment in 1963. We have used the MECO depreciation rates, including the 4% depreciation rate prior to 1971. We have used the Boston Edison Method for estimating the accumulated depreciation in the carry over year of 1963 at 50% of the MECO gross investment values in 1963(with brackets and foundation investments in 1963). The results of that recalculation are presented in the following table:

Impact of applying BECO Method to Swampscott

Year	Beginning balance	Additions	Ending balance	Cumulative	Source
1963	249,265	12,673	261,939	90,972	DCM 5 p 82 L 1
Shifted gross	85,136				Table p 19 above
	334,401	12,673	347,074	173,537	347,074 x .5
Difference				82,565	
Dep1963 transfer year				59,222	Table p 19 above
Total Impact				(141,787)	
MECO Value				228,303	
New Value				86,516	
% reduction				62%	

Impact of Applying Boston Edison Method to Franklin

Year	Beginning balance	Additions	Ending balance	Cumulative	Source
1963	115,567	33,800	149,367	53,449	DCM 5 p 81 L 1
	85,404				Table p 19 above
	200,971	33,800.	234,771	117,385	234,771 x .5
Difference				63,936	
Dep 1963 to transfer yr				59,715	Table
Total Impact				(123,651)	
MECO Value				552,411	
New Value				428,760	
% Reduction				22%	

The Petitioners contend that the statutory standard of unamortized investment, which has been interpreted by the Department to mean the book value of gross plant investment, net of accumulated depreciation, should not be subject to variations between 22% and 62% based on the whims, and the silent assumptions of a particular utility. If the Boston Edison method is correct, then the MECO new two year old formula is wrong. It makes sense to have variations between utilities based on utility specific depreciation rates. The above calculations use the Mass Electric depreciation rates. It does not make sense to have the kind of variations and opportunities for gamesmanship that are apparent in the above comparison of two different Companies' interpretation of DTE 01-25.

The rules for calculating plant value should require a reasonable assumption regarding the estimate of the carry over reserve in the carry over year. The MECO assumptions of zero accumulated depreciation are obviously unfair and one sided. The assumption in the Boston Edison method appears to be a reasonable.

The rules for using one common set of gross plant investment values that are verifiable and subject to audit makes common sense, and that approach complies with the statute. The MECO formula that shifts gross plant values on 40% of the plant into the 1980 and 1983 vintage years is obviously unfair and one sided. The BECO approach to this issue is reasonable, and complies with both the statute and the rulings. The Mass Electric approach is not reasonable, and does not comply with the statute or the rulings.

The "useful life rule" with respect to streetlight depreciation rates should apply equally to all utilities. The Company should bear the burden of demonstrating any depreciation rate used reflects the useful life of streetlight equipment. The Company has not met that burden in this case.

3.6 The Company's "prior method", used to calculate the $366,228 purchase price in Franklin, did not comply with DTE 98-89.

DTE 98-89 did not authorize the use of depreciation study to allocate system wide reserve to Lexington's streetlights. DTE 98-89 authorized the use of historical and future depreciation studies to determine a depreciation rate, and required that the system wide rate be then used to calculate community specific depreciation. If such a system wide allocation of reserve had been authorized by DTE 98-89, the Department would have been required to distinguish and / or over turn that alleged aspect of the earlier ruling in DTE 01-25. Instead, DTE 01-25 cites with favor the Boston Edison Method for developing streetlight specific depreciation rates and applying those depreciation rates, as demonstrated in the earlier ruling.

In DTE 98-89, the Department gave the utility three choices for determining the streetlight specific depreciation rate that the reflected shorter useful life of streetlight equipment to be used in that case:

> ". . . a future depreciation study would not resolve *the issue of the appropriate depreciation rate to be applied to streetlighting equipment during the period* from the last depreciation study, and the valuation required by the Act. The Company may either
>
> 1) "use the streetlight specific depreciation rate proposed by the towns
>
> 2) allocate the streetlighting specific *depreciation rate* from the last depreciation study *to the gross plant in service . . .*
>
> 3) perform a depreciation study, and allocate a streetlighting-specific *depreciation rate to the gross plant in service . . .*" (Emphasis Added)
>
> (DTE 98-89 p 4, and 5)

Each of the above three options, listed by the Department, were options for determining a streetlight specific depreciation rate. In the third option listed, the Department allowed the use of a depreciation study as one of three approaches *to determine a streetlight specific depreciation rate*. The "issue to be resolved" was the "appropriate depreciation rate to be applied to streetlighting equipment during the period from the last depreciation study". None of the above options describe a method for allocating system wide reserve. Boston Edison interpreted this ruling correctly by using one of the three methods outlined, and then applying the depreciation rate so determined to the Lexington specific annual gross plant values since the last depreciation study.

Mass Electric's "prior method" *did not* use a depreciation study *to determine a depreciation rate.* Mass Electric started with an approved depreciation rate, then continually readjusted that depreciation rate, in a fashion that conflicted with the clear intent of DTE 98-89. Mass Electric's "prior method" continually readjusted the assumed useful life of the streetlight equipment, in a fashion that resulted in the streetlight "effective depreciation rate" that could drop below the

composite distribution rate, and readjusted the useful life assumed for streetlight equipment so that it could extend beyond the useful life assumed for distribution plant equipment. Mass Electric 's "prior method" conflicted with the clearly expressed intent of the central holdings in the ruling in DTE 98-89: namely, that streetlights must be depreciated in a fashion that reflects the shorter useful life of streetlight equipment.

The negative book value of ($39,320) for the Lexington streetlights, calculated by Boston Edison, was the direct consequence of applying a depreciation rate that reflected the shorter assumed useful life of streetlight equipment. The tables in DTE 98-89, (specifically Table 3) referred to by the Department in page 6 of the DTE 01-25 ruling makes crystal clear that the Department understood that the direct consequence of applying a depreciation rate that reflected the assumed shorter useful life of streetlight equipment was to establish a negative book value for those streetlights in Lexington. Boston Edison understood this consequence of the ruling. The Town of Lexington understood this consequence of the ruling. The only Company apparently confused by that ruling was Mass Electric.

Mass Electric's "prior method" used a depreciation study to allocate system wide retirements in a fashion that assigned a positive value to all streetlight equipment in every community, irrespective of the depreciation of that equipment in that town. The method used by Boston Edison in DTE 98-89, and accepted by the Department as an appropriate method for determining unamortized investment of streetlights for sale, did not. Mass Electric's "prior method" continually reassigned new "effective depreciation rates" to existing streetlight equipment when that equipment did not retire at the end of it assumed depreciable life. The method used by Boston Edison in DTE 98-89 did not. Mass Electric's "prior method" allows the effective streetlight depreciation rate to fall below the composite plant depreciation rate. The method used by Boston Edison in DTE 98-89 does not. Mass Electric's "prior method" allows the useful life of streetlight equipment to be readjusted so that it is longer than the assumed useful life implicit in a 2.9% composite plant depreciation rate. The method used by Boston Edison in DTE 98-89 does not. Mass Electric's "prior method" by design could not produce a negative value for the Lexington streetlights. By design, Mass Electric's prior method could only produce a positive value for Lexington streetlights. The purchase price method employed by Boston Edison complied with DTE 98-89. Mass Electric's "prior method" did not.

The $366,228 purchase price, calculated by Mass Electric using their prior method, understated depreciation for all of the reasons mentioned in the previous paragraph. That result was only made possible by the distortion of DTE 98-89 ruling. Now Mass Electric is proposing a similar distortion of and strained reading of the ruling in DTE 01-25.

Section 4 Allocation

4.1 The statute requires the Company to distinguish between the unamortized investment of equipment acquired and un-acquired.

C164 s 34A gives the community the right to purchase a portion of the streetlights in the community, and pay only the unamortized investment to the portion that is purchased.

> "In meeting this requirement, the municipality may acquire all or any part of such lighting equipment of the electric company upon payment of the unamortized investment allocable to such acquired equipment."
>
> G.L. c 164 s 34A (b)

The statute clearly imposes an obligation on the Company to determine the "unamortized investment allocable" to municipal streetlight equipment. In utility practice, and in the rulings of the Department, the three fundamental variables in calculating unamortized investment are original installed cost, community specific retirements and accumulated depreciation. See for example, DTE 01-25 at page 6 and 7:

> "In the absence of Town specific data on the cost of early retirements, unamortized investment shall be determined by subtracting the accumulated depreciation from the *original cost of the community's streetlights* being acquired."

This formula is a refinement of the general formula for determining the unamortized investment found at page 5 of DTE 01-25;

> "Unamortized investment is equal to the book value of gross plant in service, net of accumulated depreciation"

In other words, the general rule is that unamortized investment is determined by subtracting accumulated depreciation from the bedrock starting point of gross plant in service. Gross plant in service is comprised of two components: original installed costs and retirements. The refinement to this general formula, introduced by DTE 01-25 was that *in the absence of community specific retirement data*, the retirement values could be ignored, and that the unamortized value could be determined by simply subtracting accumulated depreciation from the original installed costs. If community specific retirement data is available, which it is in this case, unamortized investment is comprised of three components, original installed costs, community specific retirements, and accumulated depreciation.

4.2 The Company has not met its statutory burden to allocate unamortized investment

The Company has proposed to allocate "price" in a fashion that does not distinguish between any of the three components of unamortized investment.

Under the Company's allocation formula, the Company is proposing to value every dedicated T pole in Franklin, those purchased by the Community, and those retained by the Company, at $433.97 per pole, irrespective of the distinctions in original installed costs, between older installations and newer installations, and irrespective of the distinctions between the depreciation already paid on older installations and as compared to the depreciation paid on newer installations.

The Company's "price allocation formula" ignores original installed costs. The Company's "price allocation formula", ignores accumulated depreciation. The Company's formula does not allocate "unamortized investment". The Company's formula does not comply with the statute.

4.3 The Company's purchase price data confirms that the older equipment purchased is being used by the Company to subsidize the unamortized investment of newer equipment that is retained by the Company

The very fact that that Company's reports that the original installed cost of dedicated T pole in 2003 is $1,429.01, (See DTE 2-2, Attachment 2, p 5 of 6) and the Company is proposing an a purchase price of all of the T poles in the community (those purchased, and those not purchased) of only $433.97 represents implicit recognition that older dedicated poles with lower original installed costs that are significantly depreciated, are bringing down the average book value of the of the newer dedicated poles that have been installed at higher installed costs that are only slightly depreciated, that are being retained by the Company.

None of the allocation formulas proposed by the Company address this statutory infirmity. All of the allocation proposals proposed by the Company burden the older municipal equipment with unamortized investment of the newer equipment that is not being purchased. In Franklin for example, the "average price" of the dedicated T pole is virtually the same in each of the Company's four "allocation proposals. See the following prices for the dedicated T pole as proposed by the Company in Franklin:

$433.97	Initial proposal (see petition at Tab C page 114)
$433.93	DTE 2-2 Attachment 2, page 1 of 6
$433.97	DTE 2-2 Attachment 4, page 1 of 9
$433.93	DTE 2-2 Attachment 6, page 1 of 8

The Company's allocation formula assigns the same value to a T pole installed on County Club drive in 1975, which the Town is proposing to purchase, (see lines 2, 3, 4, and 5 of Exhibit WAF 5) as they assign to the T pole installed On Lenox Drive in 2002, which the Town is not proposing to purchase (see Exhibit WAF 6 at line 62.) This is not an allocation of the "unamortized investment" allocable to the dedicated poles purchased on Country Club Drive. The poles on Country Club Drive are 29 years old. The original installed cost was in 1975 dollars. At the depreciation rates used by the Company, these poles would be over depreciated and have a negative value. The only way to assign a value of $433.97 to the 29 year old poles on Country Club Drive and the 1 year old poles on Lenox Drive, is to allocate the reserve generated by the 29 year old poles purchased, to the 1 year old poles not purchased. This is precisely the type of subsidization the Department wants to avoid. This is not an allocation of unamortized investment in compliance with the statute.

All of the allocation proposals of the Company suffer from the same statutory infirmity. None of the allocation proposals made by the Company comply with the statute, because none of the allocation formulas attempt to determine the "unamortized investment allocable to the acquired

equipment." None of the allocation proposals distinguish between the differences in installed cost over time, or the differences in depreciation paid over time.

4.4 The "price allocation formula" proposed by the Company does not comply with DTE 02-11

In DTE 02-11, the City of Waltham objected to the proposed allocation of plant value between the streetlights purchased by the City and the streetlights retained by the utility. That case presented a set of facts very similar to the facts presented in this case. Boston Edison did not track the unamortized investment of the ancillary streetlight equipment supporting municipal lights, as compared to the ancillary streetlight equipment supporting commercial lights. Waltham alleged that the utility proposed an allocation formula that burdened the municipal lights sold with the unamortized investment more appropriately allocable to the commercial lights retained by the utility. The same statutory infirmity complained of this case was present in that case:

> " The City maintains that the company has not met its statutory obligation to provide the City with the 'unamortized investment allocable to such acquired equipment"
>
> (DTE 02-11 p 9)

In striking down Boston Edison's proposed allocation formula, the Department stated

> "If the age and vintage of the Company's equipment booked to the ancillary accounts were similar to those of the company's municipal and commercial accounts, this method (the company's allocation method) would be fair and reasonable. This is because it would appropriately capture the vintages of the investments made to support both municipal and commercial streetlight service. However, in the case of Waltham, the gross plant additions and gross plant retirements that were booked . . .demonstrates that the age and vintage of these accounts, are in fact, dissimilar."

Those are the same facts in Franklin and Swampscott.

4.5 The older (pre 95) underground lights to be purchased in Franklin have a vintage dissimilar to the newer underground lights to be retained by the Company.

Because the Company was unwilling to share the vintage information from the Company's inventory records, the Town used town permit records to establish the vintage of the underground served dedicated poles that have been installed in the neighborhood developments in Franklin. The list of 157 dedicated poles that the Town wishes to purchase, with installation dates of 1994 or earlier, are listed at page 22 of Mr. Nutting's testimony (Exhibit JDN 2, sub head JDN 3).

The Town of Franklin has deleted all underground served streetlight equipment installed in 1995 or later, and is only purchasing the underground equipment installed in 1994 or earlier. The Town has also used the Town permit records to establish the vintage of the 137 poles excluded from the purchase. (See Exhibit WAF 5 and 5, at page 45-48 of Fitzgerald exhibits, the 76 poles

listed on lines 161 through 236 of WAF 5 and the 61 poles listed on line 2 through 62 of WAF6). 103 of these 137 excluded poles have vintages of 1995 or later.

4.6 MECO purchase data does distinguish between the unamortized investment of dedicated poles installed in Franklin before and after 1995, but their allocation formula does not.

Based on MECO's records, the total unamortized value of the PUC accounts dedicated to the underground equipment that supports the dedicated poles, for all years, in Franklin was $119,064.86 (see Exhibit MECO 7 page 167, column 7, for the 9 numbers in 9 PUC groupings that total $119,064.86). The simple addition of the unamortized values for those same underground PUC equipment groupings, found in column 7 on pages 168 and 169 of MECo 7 dating back to 1995 is $89,743.19. That means that 75% of the total unamortized value of all of the underground equipment, (89,743 / 119,064) relates to dedicated poles that were installed in 1995 or later, *according to MECO's own exhibit 7.*

The actual percentage is in fact higher than that. Mass Electric's exhibit 7 places the entire $31,928.14 of account 106 unamortized value in the overhead plant column (page 167, column 6, first line of MECO 7). Account 106 relates to plant investment yet to be allocated into the appropriate PUC accounts. In fact, the lion's share of that $31,928.14, which has yet to be allocated into the appropriate PUC groupings, relates to underground equipment that is not being purchased. If you factor in account 106 into the equation, the actual percentage of total unamortized value of underground equipment, which relates to equipment installed in 1995 or later, is closer to 80% of the total unamortized value of all underground equipment. Only 20% of the total unamortized value, as quantified by Mass Electric, is related to underground equipment installed in 1994 or earlier (25% if you ignore the account 106 unallocated values).

The Town of Franklin has excluded from the purchase all of the dedicated poles and associated underground equipment installed in 1995 or later. 75% to 80% of the total unamortized value related to all of the dedicated poles and associated underground equipment in Franklin, is directly related to dedicated poles and related underground equipment excluded from this purchase. Yet the Company's allocation formula would allocate 157 / 264ths (59%) of the total unamortized value of the 264 T poles to the town, because the Town is purchasing 157 dedicated poles that generate, according to Mass Electric, 157 / 264ths of the revenue from these poles.

The Mass Electric allocation of price would be 157 poles multiplied by the average price of $433.97. (Note: The Mass Electric count of dedicated poles in Franklin is inaccurate. The Town has counted and surveyed the 294 poles listed, with the addresses shown, in WAF 5 and WAF 6. 157 of those 294 poles are to be purchased, and 137 are to be to be excluded. The Mass Electric count of 264 total poles is wrong. This discrepancy is further explained below.)

Ignoring the inaccuracy of the Mass Electric count of the dedicated poles, for the moment, the Company allocation of price, has the effect of assigning 59% of the unamortized investment associated with all of the dedicated poles in Franklin, to 157 poles to be purchased, which according to the Company's own records, can only actually account for portion of the 20 to 25% of total unamortized associated with this pre 95 equipment. (The pre 95 unamortized investment

should be distributed between the 157 pre 95 poles to be purchased and the 34 pre 95 poles to be excluded.)

With respect to the dedicated poles and associated underground equipment in Franklin, the Town's proposal is quite simple. The Town proposes to delete from the purchase price all of the unamortized dollar values that Mass Electric attributes to vintage years 1995 and later, because the Town is not purchasing any dedicated poles installed after 1994.

The Town's allocation of "unamortized investment" is a rational and reasonable attempt to comply with the statutory direction to allocate unamortized value. The Company's development of an average price does not attempt to differentiate between the any of the components of unamortized value: original installed cost, vintage based retirements, or accumulated depreciation generated. The Company's formula simply ignores the statutory direction to allocate "Unamortized Investment".

4.7 Company's inventory records are inaccurate

The Company's total count of 264 T poles in Franklin is wrong. The total number of T poles based on the Town's field survey and count is the 233 poles in WAF 5, which the Company had initially proposed to sell to the Town, and the 61 poles T poles listed in WAF 6, which are currently servicing non municipal, commercial accounts. The Town counts a total of 294 T poles not 264. The 233 T poles in the Company's original list of poles for sale to the Town is comprised o 211 T poles and 42 H poles. (See DTE 1-1 second page, Column labeled "S20 Units as of request Date" at the bottom of that column.) An H pole is a shared poled, with two lights on the same pole. 42 H poles is actually 21 poles that support 42 lights.

The Company's inventory records in Quincy were inaccurate. See in the Town's response to record request 1 and 2, the June 26 letter from the DPW Commissioner in Quincy to Mr. William Flaherty of Mass Electric complaining of some 500 streetlights that had been billed inaccurately because they were listed incorrectly, or not at all, in the streetlight inventory.

The Company's inventory records in Haverhill were inaccurate. The July 1, 1999 from Mr. Flaherty of Mass Electric, included at page 9 of Exhibit H 1 refers to a $68,547.47 credit 'due to a reconciliation of an audit of the streetlight inventory". This reconciliation related to the inaccurate use of the S20 company ownership rate, in place of the S3 customer ownership rate with respect to the dedicated poles in downtown Haverhill. A similar inaccuracy has now been uncovered in Franklin.

Three years have elapsed since the start of the streetlight discussions and streetlight audits in Franklin. At this late date, the Company's count of the dedicated poles is still inaccurate. Both Towns suspect that the overhead commercial lights are also undercounted in both communities.

The Company relies on the above described inaccurate streetlight inventory reports to make the "price allocations".

4.8 The recent vintage, post sodium conversion additions, in both communities is inequitably allocated between the municipal streetlights to be purchased and the commercial streetlights to be retained by the Company.

Aside from the unique issue in Franklin associated with the T poles in the neighborhood developments, both Towns share the same common concern regarding the allocation of post sodium conversion activity between streetlights purchased by the Towns and streetlights retained by the Company. Again the Company used an assumption that was unreasonable on its face. Every one of the Company's allocation formulas assume that the municipal streetlight inventory, which was essentially brand new at of the end of the sodium conversion, experienced the same percentage of retirements and replacements as the commercial streetlight inventory, that was not brand new. None of the allocation formulas proposed by the Company attempts to differentiate between differences in original installed cost, vintaged based retirement values, or accumulated depreciation.

The Company's allocation of post sodium additions in Swampscott takes no account of the commercial sodium conversions in Swampscott in the late 1990's that are clearly evidenced by the Swampscott retirement record. The Company's allocation of post sodium additions in Franklin, takes no account of the significant private developer activity in the Franklin neighborhoods since the sodium conversion in Franklin, and the significant number of recent vintage streetlights serving those private developers on streets that are yet to be accepted by the Town.

The Company has stated that the installation cost in today's dollars of a sodium vapor 4000 lumen fixture and bracket is $240.45. (DTE2-2 Attachment 2 5 of 6.) The fact that the Company is proposing to charge the same average price of $108.33 for every 4000 lumen sodium vapor fixture and bracket installed in Swampscott, whether it was installed in 1990 or 2003, is implicit recognition that the unamortized investment of the older sodium fixtures is being burdened with the unamortized investment appropriately allocated to the newer sodium fixtures. The Company is simply not attempting to allocate unamortized investment as that term has been defined by the rulings.

The Towns' complaint can be explained by looking at the following entries for sodium vapor 4000 lumen installations in Swampscott at page 192 of MECO exhibit 7:

Sodium Vapor Installations in Swampscott

Year	Gross Plant Investment	Unamortized Value	% depreciated
1991	81,355.10	26,155.67	68%
2002	277.64	264.51	5%

The $81,355.10 represents the year of peak expenditures for sodium conversions in Swampscott, according to the data presented by the Company. By the end of 1993, the municipal streetlight plant in Swampscott had been fully converted and was essentially brand new. The Company's own purchase price data demonstrates that the vast bulk of the sodium streetlights installed in Swampscott in 191 are now 68% depreciated below the 1991 installation costs. The Company's allocation formula does not recognize that depreciation.

The commercial streetlight plant was not brand new at the end of 1993. The Company has taken the position that they don't have easily available information that would allow them to distinguish between the percentage of additions and retirement activity since the sodium conversion that relates to municipal lights as opposed to commercial lights. So the Company's solution is to assume that 92% of that activity relates to municipal lights. This assumption defies common sense. This assumption is patently unfair. This assumption represents the Company's proposal to make the Town pay for the Company's inability to meet its statutory obligation allocate unamortized investment.

The much more reasonable assumption that would comport with common sense is that the commercial infrastructure went through a similar sodium conversion, after the Town completed its sodium conversion. In fact, the retirement record contains persuasive evidence that this is exactly what happened.

4.9 The Mass Electric Retirement Record Contradicts the Company's assumption that 92% of the post conversion activity in Swampscott was related to municipal lights

At the bottom of page 202 of MECO exhibit 7 and the top of page 203 of the same exhibit, the retirement record lists the following retirements of MERCURY lights in PUC grouping 3739113. (22,000 lumen mercury light):

Year retired	vintage	retired amount
2001	1979	990.85
1998	1979	1,981.30
1997	1979	990.85
1996	1979	14,859.75
1995	1979	1,981.30
1994	1979	9,906.42

The total of those mercury retirements is $30,710.47. At the $110,54 unit prices for this type of equipment (See Exhibit AWM 3 at page 51), this dollar amount of retirements would relate to 279 retired mercury lights. The municipal conversion from mercury to sodium was already completed at this time. A significant number of mercury light s were retired after the Town had already completed it conversion to sodium vapor lights. There is no other way to interpret this data than to assume that the non-municipal streetlights were going through the same type of conversion from mercury to sodium streetlights, after the Town had already completed its own conversion from mercury to sodium vapor streetlights. The notion that 92% of the post conversion activity in Swampscott is associated with the municipal lights is directly contradicted by this evidence from the Company's own retirement records.

4.10 The Additions activity in Franklin since the completion of the sodium conversion has been concentrated in the neighborhood developments and has been heavily concentrated in the hands of private developers.

There is simply no question about the nature of the streetlight additions activity in Franklin in the past several years. The Company has not contested the neighborhood development concentration of this additions activity, or the phenomenon of unaccepted streets, or the existence of the planning regulation that requires the use of the S3 rate, or the existence of the 1995 letter MECO letter acknowledging and agreeing to follow that procedure. In the face of this to simply say, "we don't know whether the activity was municipal or commercial so we will assume that 78% was municipal" doesn't even pass the red faced test.

4.11 The refusal to recognize differences in original installed cost and depreciation has a significant impact.

The magnitude of the inequity in the Company's failure to meet its statutory obligation to allocate unamortized values comes into focus by comparing the following two charts

MECO Unamortized values today for plant added or retired as of end of sodium conversion
Compared to
MECO Unamortized values today for plant added or retired since sodium conversion

	Total	Pre Sodium	Post Sodium
Existing Plant	166,600.36 (1)	59,993.01 (2)	106,607.35 (3)
Retired Plant	61,703.53 (1)	22,684.42 (4)	39,019.11 (5)
Total	228,303.89 (1)	82,677.43 (6)	145,626.46 (6)
%	100%	36%	64%

Notes:

(1) MECO Exhibit 7 p 188
(2) MECO Exhibit 7 sum of pre 94 values p 190 to 192
Also Appendix attached hereto p 3
(3) MECO Exhibit 7 sum of post 93 values p 190 to 192
Also Appendix attached hereto p 5
(4) MECO Exhibit 7 sum of pre 94 values p 195 to 206
Also Appendix attached hereto p15
(5) MECO Exhibit 7 sum of post 94 values p 195 to 206
Also Appendix attached hereto p 16
(6) Sum of the above values

Only 36% of the unamortized value of the total streetlight plant in Swampscott, as presented by Mass Electric, relates to the streetlight plant in Swampscott as it was improved as of the end of the municipal sodium conversion in Swampscott. (As an aside, the Town believes that the municipal sodium conversion in Swampscott was completed earlier than 1993, and that the gross investment values on the tax books for the sodium additions may be earlier than the vintage years

shown in the Company's purchase price data. We note for example, the mercury lights were all retired in 1989. We don't understand how the Mercury lights can be retired in 1989 and the sodium lights added in 1993.)

MECO Allocation of Plant Value to Town

	Total	Town	Non Town
Total	228,303.89 (1)	209,450.67 (2)	18,853.22 (3)
%	100%	92%	8%

Notes: (1) MECO Exhibit 7 p 188
(2) MECO Exhibit p 214
(3) Column 1 minus Column 2

Mass Electric's solution to the Mass Electric problem associated with Mass Electric's failure to allocate unamortized value in compliance with the statute is to assume that 92% of the additions since the completion of the sodium conversion should be attributed to the Town. It is hard to reconcile this proposal with the fact that municipal plant as improved at the end of the sodium conversion (using the MECO 1993 date) only accounts for 36% of the total unamortized value.

On its face this assumption seemed absurd to both Towns (the numbers in Franklin yield to similar results). Mass Electric adamantly refused to provide any information regarding the actual purpose (municipal or non municipal) of the additions and retirement activity since the completion of the sodium conversion in either Town.

The Towns' have provided evidence on the record that this Company assumption of identical vintage, identical installation cost and identical depreciation is clearly wrong. The Company has not provided any evidence on the record to support the clearly false assumption, used by the company.

Even though the Towns do not have the statutory burden of allocating unamortized values, the Town undertook reasonable due diligence to ascertain the portion of the post sodium activity that could reasonably be attributed to municipal streetlight infrastructure.

4.12 In the absence of a Company allocation that attempted to distinguish between the elements of unamortized investment, the Towns attempted to develop a vintaged based allocation that distinguished between pre sodium conversion and post sodium conversion unamortized values.

Both communities believed that the surprisingly high level of additions activity, and resulting unamortized value of the improvements in the streetlight plant since the completion of the sodium conversion, could not be explained by improvements to the municipal plant. In both communities there is clear evidence of significant commercial activity following the municipal sodium conversion. In Franklin, this commercial activity relates to private developer activity in the neighborhood development in Franklin. In Swampscott, this relates to the evidence of the

retirement of approximately 279 mercury lights (see below) at a point in time when the municipal lights had already been converted to sodium.

The Towns did not have enough information regarding the commercial streetlight infrastructure to evaluate the activity in that private sector portion of the streetlight plant. Both Town's decided the best course of action would be to focus on estimating the municipal activity since the completion of the sodium conversion, because the Towns' had access to information about the municipal activity. The assumption was that whatever additions activity was remaining, after reasonably accounting for the municipal activity, would of necessity relate to non municipal activity.

The starting point for estimating the municipal activity was the information provided by Mass Electric regarding the nature of the capital additions since the end of the sodium conversion that was accounting for the unamortized value of that post conversion improvements. The Mass Electric purchase price data identified three categories of capital cost that contribute to the unamortized value of the additions since the sodium conversion, new fixtures, new brackets, new dedicated poles and associated underground equipment.

Using the types of capital cost identified by Mass Electric, the Towns attempted to determine the level of municipal capital cost since the completion of the sodium conversion in both communities, that could be appropriately categorized into the MECO identified capital cost groupings of new fixtures, new brackets or new dedicated poles and associated underground equipment. The due diligence of the Towns focused on two areas of potential *municipa*l capital cost activity: a) new fixtures, brackets or dedicated poles *requested* to be installed by the Towns, and b) all other *non requested* capital costs for new municipal fixtures, municipal brackets and municipal dedicated poles incurred by the company with respect to the municipal inventory.

Requested Municipal Additions

With respect to new capital projects for new fixtures, brackets and dedicated poles and associated underground equipment *requested* by the Towns, the Towns reviewed municipal files regarding those requests and tabulated the results. These results are summarized in the column labeled "new" of Table 9 in Exhibit DCM-4, which shows 98 *municipal requests* for new overhead fixtures in Franklin, since the completion of the sodium conversion in Franklin, and 11 *municipal requests* for new overhead fixtures in Swampscott since the completion of the sodium conversion in Swampscott. In both cases the Towns confirmed the conservatism of their count (in favor of the Company) by checking these counts for new overhead fixtures and brackets against the records provided by the Company regarding new municipal requests in the same period. (See for example Exhibit AWM – 1, table 10 for Swampscott, in which the Company only had records of 4 municipal request for new fixtures, not 11, the assumption used by the Town. Also see response to MECO Record Request 6 in which the Company only had records of 78 municipal request for new overhead fixtures, not 98 , the assumption used by the Town.)

Non Requested Municipal Additions

With respect to estimating the new capital projects for replacement fixtures, replacement brackets, and replacement underground equipment, that was *not requested,* both Towns turned to a company in the business of providing streetlight maintenance services for guidance. Mr. Joseph Curran, the President of Brite-Lite Electrical Company provided his testimony at the February 24th hearing regarding the report that he provided to both Franklin and Swampscott regarding the capital replacement frequencies, for fixtures, brackets and dedicated poles, encountered by Brite-Lite in four reference communities. This report was placed on the record its entirety in the testimony provided by Mr. Nutting. (See Exhibit JDN 2, at p 18 of the Nutting testimony.)

At the hearing on February 24th there was initial confusion regarding the objectives of and the use of the Brite-Lite report. The Bite-Lite report was not designed to forecast maintenance cost. It was not designed to replace or supplant MECO's reported capital cost. It was intended only to provide a reasonable basis for the Town to estimate the portion of MECO's reported capital cost that could reasonably be attributed to the municipal portion of the streetlight inventory. That estimate was needed because MECO could not, or chose not, to provide any information, or any evidence, regarding the portion of the capital costs that could be attributed to the municipal portion as opposed to the commercial portion of the streetlight inventory.

On cross examination of Mr. Curran, and subsequently of Mr. Fitzgerald, Mass Electric attempted to create the impression that the Brite-Lite report was less than comprehensive. The very first paragraph of that report makes crystal clear that the report provides "the total numbers of heads (fixtures) replaced, brackets replaced, and dedicated poles replaced since the inception of those service contracts, for any and all reasons," in the four reference communities of Natick, Waltham, Watertown and Westwood.

The Towns believe that they have used reasonable due diligence to do the allocation work that should have done by Mass Electric. The Towns believe that they have used reasonable due diligence to arrive at a reasonable estimate of the capital replacement frequencies typically encountered with respect to very similar municipal streetlight inventories. The 10,000 streetlight sample used to develop the Towns capital replacement estimate represented a sample of sodium vapor streetlights, in the four reference communities, that were approximately 10 years old (see second paragraph of the Brite-Lite Report.) That means that the Towns were using capital replacement frequencies experienced on 10 year old fixtures as a proxy for capital replacement fixtures that were on average 4 years old in Franklin and 5 years old in Swampscott. Using this conservative approach, the Towns used the capital replacement frequencies in the four reference communities as reported in the Brite-Lite report as a proxy for the capital replacement frequency of the relatively new sodium vapor streetlights in Franklin and Swamspcott.

Results of the Town's due diligence regarding allocation assumptions.

In Swampscott, based on the review of the municipal request for new streetlights, and the application of the fixture replacement frequencies experienced in the four reference communities, Swampscott estimated that there had been 11 municipal requests for new overhead

streetlight installations (Mass Electric only reported 4) and 48 non requested fixture replacements since the completion of the sodium conversion in 1993.

In Franklin, based on the review of the municipal request for new streetlights, and the application of the fixture replacement frequencies experienced in the four reference communities, Franklin estimated that there had been 98 municipal requests for new overhead streetlight installations (Mass Electric only reported 78) and 45 non requested fixture replacements since the completion of the sodium conversion in December of 1995.

In addition, in Franklin, there is considerable confusion regarding the ownership of the underground served dedicated poles that have been installed since January of 1995. The Town understood that these post 1994 dedicated pole installations were to have been installed at the cost of developers, and placed on the S3 customer ownership rate. The Town's understanding was based on the Town's planning regulations that require this approach and correspondence from 1995, which is on the record, from Mass Electric that the Company understood and was adhering to this policy. When it became apparent in the course of the hearings that this was not the case, the Town exercised its right to eliminate the dedicated poles installed since 1995 from this purchase, until such time as the Town and Mass Electric can sort the "who owns the poles" confusion. So in the case of Franklin there was the additional step in the allocation of eliminating the unamortized values reported by Mass Electric for the dedicated poles and the underground equipment installed since 1995.

The Town provided the assumptions regarding newly requested installation and non requested capital replacement, and in the case of Franklin elimination of the post 94 dedicated poles from the purchase, to Stone and Webster, and requested that Stone and Webster perform the allocation of unamortized value, using the Mass Electric reported capital costs, and Mass Electric depreciation rates to arrive at an allocation of unamortized value.

The results of the Towns" analysis was presented by the Towns" professional witness in Table 10 of exhibit DCM 4. The Towns" allocation distinguished between the unamortized values associated with pre sodium conversion activity and post sodium conversion activity, and the sector responsible for contributing to the post sodium conversion activity. The Company's allocation of price made no distinctions between any of the components of unamortized value. The Towns' analysis allocated 8% of the post sodium conversion *activity* to the town of Swampscott and 22% of the post sodium conversion *activity* to the Town of Franklin. This compared with the Company's allocation of 92% of the post sodium conversion *price* to Swampscott and 78% of the post sodium conversion *price* to Franklin.

After blending the pre sodium conversion percentages and post sodium conversion percentages, the overall allocation of value, (both pre and post sodium values), determined by the Towns' analysis was follows:

	Town Percentage of Total Value	Non Town Percentage of Total Value
Franklin	33.1 %	66.9 %
Swampscott	27 %	73 %

The Towns do not claim that their approach is perfect. One of the problems with the Towns' approach is that the only vintaging employed is a broad based, pre sodium conversion and post sodium conversion vintaging. The Towns do contend that the assumptions used to estimate the municipal portion of the post sodium activity are reasonable. And they are certainly more reasonable than the Company's assumption that all streetlight equipment has the same original cost, and the same depreciation, whether that equipment was installed in 1975 or 2003. The Town allocation is the only allocation that attempts to deal with the components of unamortized investment.

4.13 Towns' Assumptions regarding post sodium municipal activity are supported by the MECO streetlight inventories.

Exhibit Inventory 2 is the Mass Electric Inventory of streetlights in Swampscott as of December 31, 2001. By reviewing the column labeled "Effective Date" in that streetlight inventory, there are only 35 lights in that December 2001 inventory (i.e. with municipal account numbers) that have "Effective dates" after 1993. This compares to the following count used by the Town to estimate municipal additions activity following the sodium conversion in Swampscott. (See DCM 4 table 9.)

New municipal requested fixtures in Swampscott	11
Non requested Replacement Fixtures in Swampscott	48
Total municipal fixtures in Swampscott since 1993	59

The MECO inventory record of 35 municipal fixtures since 1993 in Swampscott confirms two important points.

First, the 59 count used by the Town, as the Town has claimed, is conservative in favor of the Company. Even if you prorate the 35 number to account for the activity in 2002 and 2003 (the inventory was dated 12/31/2001) the resulting count of 44 municipal lights is still less than 75% of the 59 number used by the community for the purpose of making its allocation.

Second, the 35 count, or the prorated 44 count, is higher than the 11 municipal additions requested by the Town (and higher than the 4 requested municipal additions reported by MECO). This would seem to indicate that these "effective dates" do reflect installation activity other than the additions activity associated with new requested municipal additions.

We do not have a recent MECO inventory in Franklin to perform the same sort of affirmation of the Town's count. In Swampscott, we were lucky enough to find a Mass Electric inventory that had been provided two years ago, before this controversy began. We expect that if the Company were to provide a December 31, 2001 inventory in Franklin, with the same level of detail as is included in that Swampscott inventory, that the effective dates in that inventory would confirm the Franklin count in the same fashion that the Swampscott inventory confirmed the Swampscott count.

4.14 The Mass Electric Retirement Record in Swampscott supports the Town count in both communities.

The newly requested municipal installations have been directly confirmed by the Company's own records provided in response to the Town discovery requests. The Company's count of newly requested overhead installation in Franklin was 78 and compared to the Town's count of 98. The Company count of newly requested installation in Swampscott was 4 and compared to the Town's count of 11.

The controversy and the debate in the course of the hearings in this proceeding centered on the use of municipal replacement frequency for sodium fixtures in the four references communities, all of which were in the Boston Edison service territory, as the proxy for the municipal capital frequency in Franklin and Swampscott. We have demonstrated above, that the MECO Swampscott inventory supports the Town's contention that Town assumption regarding the municipal capital frequency was conservative in favor of the Company. (The Towns assumed more municipal capital replacements in Swampscott than the 2001 Swampscott inventory identifies in the period of time since the end of the sodium conversion.) The MECO retirement record in Swampscott provides additional confirmation of the fixture replacement frequency used by the Towns to estimate municipal fixture replacements.

Three witnesses provided evidence from the Swampscott retirement record of a conversion from incandescent to mercury fixtures in Swampscott in 1950. Mr. Maylor and Mr. Moody both discussed the installation of mercury lights that were installed in 1950 and retired in 1989 in their direct testimony. Mr. Currie provided testimony on this subject under cross examination at pages 455 through 458. There was some debate about the dollar magnitude of the retirement that might have occurred in 1950, coincident with the installation of the mercury lights. But there was no debate about the fact that $69,348.78 of 4,200 lumen fixtures were installed in Swampscott for the first time in 1950 and that those 4,200 lumen fixtures were subsequently retired in 1989. (See MECO Exhibit 7 p 199, 19 lines up from the bottom of the page.)

When a streetlight fixture is replaced because of storm damage, or vandalism, or whatever reason, the fixture that is replaced is retired. For a 39 year period between 1950 and 1989, the municipal mercury fixtures were operating in Swampscott. We have a 25 year retirement record of the annual retirements of the 4,200 lumen mercury fixture in Swampscott between 1964 and 1989. These retirements are listed on pages 199, 200 and 201 of MECO Exhibit 7. For ease of reference, we have reorganized those entries, sorted by retirement year in Appendix I , attached hereto. That retirement record identifies the following capital replacement frequencies of the Mass Electric 4,200 lumen lights in Swampscott in the following periods of time:

Years	Retirement Amount	Unit Cost	Fixtures replaced / yr
1965 to 1970	$2,754.76	69.10	5.7
1971 to 1980	$4,149.29	67.87	6.1
1981 to 1988	$7,076.12	74.76	11.8
1989 (installed 1950)	$69,348.78	77.92	890

1989 (installed 1960)	$ 7,512.13	79.08	95

Exhibit AWM 3 at pages 52, 53 and 54 shows a sort of these retirements sorted by retirement amount to focus on the unit prices inherent in these retirement numbers. The unit cost used in the above table are the lowest unit cost presented by the data in the time period in question. The point of that is to be conservative in overestimating rather than underestimating the number of fixtures actually retired. The Towns believe that the capital replacement frequency of 5.7 fixtures per year in the time frame that is 15 to 20 years after the 1950 conversion to this type of fixture in Swampscott, tends to confirm the capital replacement frequency used by the Town. The above described retirements represent the total of all of the retirement of this type fixture in each of the time frames reported, at a point in time when some 1,000 of these fixtures were installed and operating in the Town (985 fixtures in the last two entries alone in the above table).

Expressed as a percentage of a total population of 1,000 fixtures, the capital replacement frequency by MECO, of MECO fixtures, in Swampscott, 15 to 20 years after the mercury conversion was .57% per year.

4.15 Towns' assumption regarding capital replacement frequency following the sodium conversion is conservative

The Towns believe it is reasonable to assume that the municipal sodium fixture replacement frequency, four to 5 years old on average, following the sodium conversion in Franklin and Swampscott, should be similar to (or less than) the sodium fixture replacement frequency in the four reference communities of Natick, Waltham, Watertown and Westwood, because the reference capital replacement frequency related to sodium fixtures that were on average 10 years old.

The Towns believe the conservatism of the Town assumption regarding the capital replacement frequency is confirmed by the MECO 2001 Swampscott inventory, which only includes 35 municipal lights, as of 2001, with an effective date later than 1993. If you prorate this number for two additional years, you still arrive at total of 44 new and replaced fixtures, as opposed to the 59 assumed by the Town.

The Towns believe the conservatism of the assumption used regarding the capital replacement frequency of the MECO sodium fixtures, that were on average 4 to 5 years old, is confirmed by the capital replacement frequency of the 4200 lumen MECO fixture, 15 to 20 years following the mercury conversion in Swampscott.

On the other hand, the Towns believe the assumption used by the Company are contradicted by the Company's inventory records and the Company's retirement records.

4.16 Regarding Vintage

The Petitioners contend any allocation must reasonably attempt to recognize the vintage of the equipment, that the Company has documentation in its inventory records captures a reasonable

proxy for the vintage of the equipment, that the Company has used this inventory information to establish the installation dates in Haverhill and Quincy. The Company maintains that notwithstanding the use by the Company of these inventory dates to establish installation dates in Haverhill and Quincy, the new policy of the Company is to disregard vintage, even though this new policy burdens the older municipal equipment to be purchased with the unamortized investment of the newer equipment to be retained by the Company.

In Haverhill in particular, the Company has testified that the Company began to use the vintage information from the inventory records in Haverhill to value the streetlights in Haverhill, but discontinued the use of this vintage information when the Company discovered that "latest effective date" was inaccurate.

The record in this proceeding, specifically the Haverhill negotiation correspondence at Exhibit H1, the 1987 inventory record, Exhibit Inventory 3, indicates that the City used a 1987 MECO inventory to establish the 1978 vintage of the dedicated poles on Bailey Blvd. in Haverhill. The City of Haverhill took the position that those dedicated poles were fully depreciated. And the negotiated $20,000 purchase price that Haverhill paid for those poles (Ex H1 88,547.47 less 68,547.47) was less than the value that Mass Electric had assigned to the fixtures and brackets only. (See 177,360 value for the 199 poles, and 206 to 446 per fixture and bracket or $20,000 to 40,000 for fixtures and brackets only, Exhibit H1, page 6.)

We do not contest that the Company used the device of a billing credit, to meet the City of Haverhill's position on the price. The fact that the billing credit works out to penny to achieve the round number price of $20,000, is no coincidence. The City of Haverhill was not interested in establishing a precedent. The City of Haverhill was interested in a purchase price that accounted for the fully depreciated nature of the dedicated poles.

The Company is now unwilling to make a similar vintaged based allocation of value in Franklin and Swampscott.

The Petitioners contend, at a minimum, that the vintage information available from the Company's inventory records with respect to the municipal streetlights is accurate enough to confirm and validate the petitioners proposed "pre sodium conversion - post sodium conversion" allocation of unamortized values in this proceeding.

Section 5 Conclusion

Regarding Gross Plant Investment

The petitioners contend that the generic rules used to establish the DTE 01-25 purchase price in Waltham, Natick, and Chelsea should also apply in this case. Those generic rules should include:

a. The calculation of streetlight plant value should be based on gross plant investment values that reflect the gross investment of brackets and foundations in the year of the original investment.

b. The calculation of streetlight plant value should be based one common set of community specific gross plant values, which in this case based on the record in this proceeding, should be the same common set of gross plant values in the company's general ledger, not a new set of recently reconfigured gross plant values that are hampered by the inaccuracies of a 40 year look back process.

c. The reasonable estimation of a carry over reserve in 1963 that is designed to approximate the historical reserve attributable to the historical depreciation on streetlight equipment. In the absence of a better assumption, the Petitioners would recommend the use of the 50% assumption employed by Boston Edison. And this 50% assumption should be applied after the gross investment values have been corrected to reflect the actual vintage year of the brackets and foundations.

d. The application of streetlight specific depreciation rates to correctly stated gross plant values, which depreciation rates should reflect the useful life of streetlight equipment. The Petitioners do recognize that a suitable assumption regarding the carry over reserve in 1963 would have the effect of minimizing the impact of this issue.

e. The Company should be required to either accept the pre sodium / post sodium allocation proposal of the Petitioners or to develop an allocation that recognizes vintages, accounts for differences in installed cost over time, and accounts for differences in depreciation paid over time. An allocation of price that is not based on differences in installed cost and depreciation is not an allocation of unamortized investment.

This has been a long and time consuming case. Much of the information that the Petitioners sought from the Company only came out in the discovery and hearing process. We appreciate the attention of the Department to this matter.